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      Bazan, J. Fernando
      Kastelein, Robert A.
      Ho, Stephen W.K.
      Liu, Yong-Jun
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act gtg as Thr Val As	sn Leu	ьув нт: 95	з пец 1	rab .	1	.00				105		384
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GLu		525					530				Cys				
Ser	540					545					Met 550				
5 5 5					560					505					- , .
, ,				575					560	,				505	
			590)				כעכ)					•	Arg
		605	5				PT	,				01.	,		a Phe
	620)				62:)				050	,			ı Leu
635	•				640)				0-1	J				Asn 650
				65	5				00	U			•		
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act Thr	cag Gln	gag Gli 52!	ı Gl	g o n (caa Gln	gca Ala	ctg Leu	gcc Ala 530	aaa Lys	gto Val	c t	tg eu	att Ile	gat Asp 535	tgg Trp	cca Pro	. <u>9</u>	jca la	1680
Asn	Tyr 540	Le	g to u Cy	jt <u>g</u> 7s <i>l</i>	gac Asp	tct Ser	cca Pro 545	tcc Ser	cat His	gt Va	g c l A	- 9	ggc Gly 550	cag Gln	cag Gln	gtt Val	. 0	ag In	1728
gat Asp 555	gtc Val	cg Ar	c ct g Le	cc eu	tcg Ser	gtg Val 560	tcg Ser	gaa Glu	tgt Cys	ca Hi	J	igg irg 65	aca Thr	gca Ala	ctg Leu	gto Val		cct Ser 570	1776
		tg Cy	c to	ys .	gct Ala 575	ctg Leu	ttc Phe	ct <u>c</u> Lev	ctg Lev	at Il 58	<u> </u>	etg Leu	ctc Leu	acg Thr	Gly Gly	gto Va: 58!	c (l ! 5	ctg Leu	1824
	cac His	c cg s Ar	g P	tc he 90	cat His	ggo	cto Lei	g tgg ı Tr <u>p</u>	tat Ty:	. 1410	g a	aaa Lys	atg Met	ato Met	tgg Trp 600		c a	tgg Trp	1872
	c cag ı Glı	g go n Al	.a L	aa ys	agg Arg	aag Lys	g cco s Pro	c agg o Arg	A na,	a go s Al	t d .a]	ccc Pro	agc Ser	agg Arg 619	,	c at n Il	c e	tgc Cys	1920
ta Ty:	t ga r As 62	t go p Al		tt he	gtt Val	tc! Se:	t ta r Ty 62	c ag r Se 5	t ga r Gl	g co u Ai	g .	gat Asp	gco Ala 630	~ -] .	c tg r Tr	g gt p Va	g .1	gag Glu	1968
aa As 63	c ct n Le		tg g et l	jtc 7al	caç Glr	g ga n Gl 64	u ne	g ga u Gl	g aa u As	c ti n Pl		aat Asn 645		c cc o Pr	c tt o Ph	c aa e Ly	ıg rs	ttg Leu 650	2016
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at Il	.c at .e Il	t g .e A	.sp	tcc Ser 670	IT	t ga e Gl	a aa u Ly	ıg ag rs Se	gc ca er Hi 67	.5 -	aa ys	act Thi	gt Va	c tt 1 Ph	t gt ie Va 68		tt eu	tct Ser	2112

gaa Glu	aac Asn	ttt Phe 685	gtg Val	aag Lys	agt Ser	gag Glu	tgg Trp 690	tgc Cys	aag Lys	tat Tyr	gaa Glu	ctg Leu 695	gac Asp	ttc Phe	tc Se	c r	2160
cat His	ttc Phe 700	cgt Arg	ctt Leu	ttt Phe	gaa Glu	gag Glu 705	aac Asn	aat Asn	gat Asp	gct Ala	gcc Ala 710	att Ile	ctc Leu	att Ile	ct Le	t u	2208
Leu 715	Glu	Pro	IIe	gag Glu	дув 720	пур	AIG	110		725	3		•	_	73	0	2256
cgg Arg	aag Lys	ata Ile	atg Met	aac Asn 735	acc Thr	aag Lys	acc Thr	tac Tyr	ctg Leu 740	gag Glu	tgg Trp	ccc Pro	atg Met	gac Asp 745	ga G]	ig Lu	2304
gct Ala	cag Gln	cgg Arg	g gaa g Glu 750	ı gga ı Gly	ttt Phe	tgg Trp	gta Val	aat Asn 755		aga Arg	gct Ala	gcg Ala	ata Ile 760	_	g to s Se	cc er	2352
tag																	2355
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*		-2	0	r Le			-1:	3									
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As	n Gl	y Il	.е Су	s Ly 1	s Gl [.] 5	y Se	r Se	r Gl	y Se	r Le 0	u As	n Se	r Il	e Pr 2	o S 5	Ser	
Gl	y Le	u Th	ır Gl	u Al	a Va	l Ly	s Se	r Le 3	u As 5	р Le	u Se	r As	n As 4	n Ar 0	:g]	[le	
Tł	ır Ty	r II	le Se 15	er As	n Se	r As	p Le	u Gl	n Ar	g Cy	rs Va	l As 5	n Le 5	u Gl	ln i	Ala	
Le		al Le	eu Tl	nr Se	er As	n Gl	y Il	e As	n Th	ır Il	e Gl	u Gl 70	u As	sp Se	er :	Phe	
•	75			ly Se	ξ	30				`	,,						
S	er A	sn L	eu S	er S	er Se 95	er Ti	cp Pl	ne Ly	ys Pi 10	ro Le	eu Se	er Se	er Le	eu T	hr 05	Phe	

Leu Asn Leu Leu Gly Asn Pro Tyr Lys Thr Leu Gly Glu Thr Ser Leu Phe Ser His Leu Thr Lys Leu Gln Ile Leu Arg Val Gly Asn Met Asp Thr Phe Thr Lys Ile Gln Arg Lys Asp Phe Ala Gly Leu Thr Phe Leu Glu Glu Leu Glu Ile Asp Ala Ser Asp Leu Gln Ser Tyr Glu Pro Lys Ser Leu Lys Ser Ile Gln Asn Val Ser His Leu Ile Leu His Met Lys Gln His Ile Leu Leu Glu Ile Phe Val Asp Val Thr Ser Ser Val Glu Cys Leu Glu Leu Arg Asp Thr Asp Leu Asp Thr Phe His Phe Ser Glu Leu Ser Thr Gly Glu Thr Asn Ser Leu Ile Lys Lys Phe Thr Phe Arg Asn Val Lys Ile Thr Asp Glu Ser Leu Phe Gln Val Met Lys Leu Leu Asn Gln Ile Ser Gly Leu Leu Glu Leu Glu Phe Asp Asp Cys Thr Lew Asn Gly Val Gly Asn Phe Arg Ala Ser Asp Asn Asp Arg Val Ile Pro Gly Lys Val Glu Thr Leu Thr Ile Arg Arg Leu His Ile Pro Arg Phe Tyr Leu Phe Tyr Asp Leu Ser Thr Leu Tyr Ser Leu Thr Glu Arg Val Lys Arg Ile Thr Val Glu Asn Ser Lys Val Phe Leu Val Pro Cys Leu Leu Ser Gln His Leu Lys Ser Leu Glu Tyr Leu Asp Leu Ser Glu Asn Leu Met Val Glu Glu Tyr Leu Lys Asn Ser Ala Cys Glu Asp Ala Trp Pro Ser Leu Gln Thr Leu Ile Leu Arg Gln Asn His Leu Ala Ser Leu Glu Lys Thr Gly Glu Thr Leu Leu Thr Leu Lys Asn Leu Thr

395					400					405	Met				
Gln	Trp	Pro	Glu	Lys 415	Met	Lys	Tyr	Leu	Asn 420	Leu	Ser	Ser	Thr	Arg 425	Ile
His	Ser	Val	Thr 430	Gly	Cys	Ile	Pro	Lys 435	Thr	Leu	Glu	Ile	Leu 440	Asp	Val
Ser	Asn	Asn 445	Asn	Leu	Asn	Leu	Phe 450	Ser	Leu	Asn	Leu	Pro 455	Gln	Leu	Lys
Glu	Leu 460	Tyr	Ile	Ser	Arg	Asn 465	Lys	Leu	Met	Thr	Leu 470	Pro	Asp	Ala	Ser
Leu 475	Leu	Pro	Met	Leu	Leu 480	Val	Leu	Lys	Ile	Ser 485	Arg	Asn	Ala	Ile	Thr 490
g.	į			495					500		: Thr				
Glu U	Ala	Gly	Gly	Asn	Asn	Phe	Ile	Cys 515	Ser	Cys	s Glu	Phe	Leu 520	Ser	Phe
Thr	Glr	Glu 525		n Gln	Ala	Leu	Ala 530	Lys	Val	Lev	ı Ile	8 Asp 535	Trp	Pro	Ala
Asr	туз 540		ı Cys	s Asp	Ser	Pro 545	Ser	His	s Val	. Arg	g Gly 550	glr	n Glr	ı Val	Gln
Asy 55		L Ar	g Lei	ı Sei	Val 560	Ser	Glu	суз	s His	56	g Thi 5	c Ala	a Lev	ı Val	Ser 570
GE	y Me	t Cy	s Cy:	s Ala 579	a Leu 5	Phe	. Let	Let	1 Ile 580	e Le	u Lei	ı Thi	r Gly	7 Val 585	L Leu
Су	s Hi	s Ar	g Ph	e Hi: O	s Gly	Lev	ı Trp	59:	r Me	t Ly	s Me	t Me	t Trj 60	o Ala O	a Trp
Le	u Ģl	n Al 60	а L y 5	s Ar	g Lys	Pro	610	o Fy	s Al	a Pr	o Se	r Ar 61	g As: 5	n Il	e Cys
Ту	r As 62		a Ph	e Va	l Sei	с Ту: 62!	r Se:	r Gl	u Ar	g As	sp Al 63	а Ту 0	r Tr	p Va	l Glu
As		u M∈	et Va	l Gl	n Glu 64	u Le [.]	u Gl	u As	n Ph	e As 64	sn Pr 15	o Pr	o Ph	е Гу	s Leu 650
Су	s Le	eu Hi	s Ly	s Ar 65	g As 5	p Ph	e Il	e Pr	o Gl 66	.у Гу	ys Tr	p Il	e Il.	e As 66	p Asn 5
, Il	e II	le As	sp Se	er Il 70	e Gl	u Ly	s Se	r Hi 67	.s Ly 75	/s Tl	hr Va	al Ph	ne Va 68	al L∈ 30	u Ser

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His Phe Arg Leu Phe Glu Glu Asn Asn Asp Ala Ala Ile Leu Ile Leu
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                         705
Leu Glu Pro Ile Glu Lys Lys Ala Ile Pro Gln Arg Phe Cys Lys Leu
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Ala Gln Arg Glu Gly Phe Trp Val Asn Leu Arg Ala Ala Ile Lys Ser
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     -20
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                                                                      96
 Phe Gly Met Leu Cys Ala Ser Ser Thr Thr Lys Cys Thr Val Ser His
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  -5
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 Glu Val Ala Asp Cys Ser His Leu Lys Leu Thr Gln Val Pro Asp Asp
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 cta ccc aca aac ata aca gtg ttg aac ctt acc cat aat caa ctc aga
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 Leu Pro Thr Asn Ile Thr Val Leu Asn Leu Thr His Asn Gln Leu Arg
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 aga tta cca gcc gcc aac ttc aca agg tat agc cag cta act agc ttg
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45

gat Asp 60	gta Val	gga Gly	ttt Phe	aac Asn	acc Thr 65	atc Ile	tca Ser	aaa Lys	ctg Leu	gag Glu 70	cca Pro	gaa Glu	ttg Leu	tgc Cys	cag Gln 75	288	
aaa Lys	ctt Leu	ccc Pro	atg Met	tta Leu 80	aaa Lys	gtt Val	ttg Leu	aac Asn	ctc Leu 85	cag Gln	cac His	aat Asn	gag Glu	cta Leu .90	tct Ser	336	
caa Gln	ctt Leu	tct Ser	gat Asp 95	aaa Lys	acc Thr	ttt Phe	gcc Ala	ttc Phe 100	tgc Cys	acg Thr	aat Asn	ttg Leu	act Thr 105	gaa Glu	ctc Leu	384	
cat His	ctc Leu	atg Met 110	tcc Ser	aac Asn	tca Ser	atc Ile	cag Gln 115	aaa Lys	att Ile	aaa Lys	aat Asn	aat Asn 120	ccc Pro	ttt Phe	gtc Val	432	-
Lvs	cag Gln 125	Lys	aat Asn	tta Leu	atc Ile	aca Thr 130	tta Leu	gat Asp	ctg Leu	tct Ser	cat His 135	aat Asn	ggc Gly	ttg Leu	tca Ser	480	
£ E	aca Thr		tta Leu	gga Gly	act Thr 145	cag Gln	gtt Val	cag Gln	ctg Leu	gaa Glu 150	aat Asn	ctc Leu	caa Gln	gag Glu	ctt Leu 155	528	
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gg(Gl)	c cto 7 Lei 20!	ı Phe	c cto e Lei	g aac ı Ası	aat Asn	gtc Val	GII	g ct <u>c</u> 1 Lei	g ggt ı Gly	ccc Pro	c ago Ser 219		aca u Thi	gag Glu	aag Lys	720	
cta Lei 22	д Су	t ttg s Le	g gaa u Gli	a tta u Lei	a gca ı Ala 225	a Asr	aca n Thi	a ago r Sei	c att	cgg Arg 23	g Ab.	t cto	g tct u Sei	c cto	g agt 1 Ser 235	768	
		c ca r Gl	g ct n Le	g tce u Se: 24	r Thi	e acc	c age	c aat r Asi	t aca n Th: 24	T 111	t tt r Ph	c tt e Le	g gga u Gl	a cta y Lev 250	a aag 1 Lys 0	816	
tg Tr	g ac p Th	a aa r As	t ct n Le 25	u Th	t ato	g cto t Le	c ga u As	t ct p Le 26	u se	c ta r Ty	c aa r As	c aa n As	c tt n Le 26	u	t gtg n Val	864	
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gtt ggt Val Gly	Asn A	Asp S	Ser 1	Phe.	АІА	275	Leu	PIO	GIII	Бец	280	-1-	1110		912
cta gag Leu Glu 285	tat a Tyr A	aat a Asn <i>l</i>	aat Asn	He	cag Gln 290	cat His	ttg Leu	ttt Phe	tct Ser	cac His 295	tct Ser	ttg. Leu	cac His	GJÀ aaa	960
ctt ttc Leu Phe 300	Asn \	Val 1	Arg	Tyr 305	ьеи	ASII	ьец	пур	310	Der	THE	1111	Lys	315	1008
agt att Ser Ile	tcc (Ser]	Leu .	gcc Ala 320	tca Ser	ctc Leu	ccc Pro	aag Lys	att Ile 325	gat Asp	gat Asp	ttt Phe	tct Ser	ttt Phe 330	cag Gln	1056
tgg cta Trp Leu	Lys	tgt Cys 335	ttg Leu	gag Glu	cac His	ctt Leu	aac Asn 340	atg Met	gaa Glu	gat Asp	aat Asn	gat Asp 345	att Ile	cca Pro	1104
gg∉ata Gl <u>y</u> Ile Ū	aaa Lys 350	agc Ser	aat Asn	atg Met	ttc Phe	aca Thr 355	gga Gly	ttg Leu	ata Ile	aac Asn	ctg Leu 360	aaa Lys	tac Tyr	tta Leu	1152
age cta Ser Leu 365	Ser	aac Asn	tcc Ser	ttt Phe	aca Thr 370	agt Ser	ttg Leu	cga Arg	act Thr	ttg Leu 375	T 1 1 1	aat Asn	gaa Glu	aca Thr	1200
ttt gta Phe Val		ctt Leu	gct Ala	cat His 385	tct Ser	ccc Pro	tta Leu	cac His	ata Ile 390	шeu	aac Asn	cta Leu	acc Thr	aag Lys 395	1248
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eta gaa Leu Gli	a gta ı Val	ctt Leu 415	gac Asp	ctg Leu	ggc	ctt Leu	aat Asn 420	GIU	att Ile	ggg Gly	g caa g Gln	gaa Glu 425		aca Thr	1344
ggc cag Gly Glı	g gaa n Glu 430	tgg Trp	aga Arg	ggt Gly	cta Lev	gaa Glu 435	I ASI	att Ile	tto Phe	gaa e Glu	a atc 1 İle 440	1-	ctt Lei	tcc Ser	1392
tac aac Tyr As: 44	n Lys	tac Tyr	ctg Lev	cac Glr	g ctg Lei 450	1 1111	agg Arg	g aad g Asi	tco n Sei	c ttt r Phe 45!		tto a Lev	g gto 1 Val	c cca l Pro	1440
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agc tc Ser Se	t cct r Pro	tca Ser	cca Pro	a tto D Pho	c ca e Gl	g cc n Pr	t cti	t cg u Ar	t aa g As	c tt n Le	g ac u Th	c ato	t ct e Le	g gat u Asp	1536

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480 485 490

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t gag	Lys	aag Lys	gtt Val	ttc Phe	GTA	Pro	gct Ala	ttc Phe	agg Arg	Her	пец	act Thr	gag Glu	tta Leu	1920
t ato p Met	g cgo	ttt g Phe	aat Asn	Pro) Phe	gat Asp	tgc Cys	acg Thr	. Cys	S GIL	agt Ser	att Ile	gcc Ala	tgg Trp 635	1968
t gtt e Val	aat L Ası	tgg Trp) Ile	e Asr	gag Glu	g aco	cat His	i TIII	. ASI	ato n Ile	c cct Pro	gag Glu			2016
c cad r His	c tac s Ty:	r Leı	ı Cys	aac Ası	act n Thi	c cca) bro) UT;	c tat s Tyi	c cat	ggs Gly	1110		a gtg o Val	2064
a ct g Le	u Ph	e As	t aca p Thi	a tca r Se:	a tc r Se:	r Cy	е гъ	a gad s Asj	c agt p Se:	t gc r Ala	a PI	J F110	gaa e Gl	a ctc u Leu	2112
ie Ph	e Me	g at t Il	c aat e Ası	t ac	r Se	r 11	c cto e Le	g tte	g at u Il	e PII	G TT	c tt: e Ph	t at e Il	t gta e Val	2160
	Ser gau tree can gar the ser g	gag aaa Glu Lys 510 tgg aaa Trp Lys 525 tct Cac Ser His cca gtt Pro Val gga ttg Gly Leu gtg tct Val Ser 590 t gag aag Glu Lys 605 t atg cgc p Met Arg 0 t gtt aat c cac tac c His Ty: ga ctt tt	gag aaa cta Glu Lys Leu 510 tgg aaa cac Trp Lys His 525 tct cac ctc Ser His Leu cca gtt gag Pro Val Glu gga ttg aat Gly Leu Asn 575 gtg tct cta Val Ser Leu 590 gag aag aag Glu Lys Lys 605 t atg cgc ttt p Met Arg Phe ccac tac ctt r His Tyr Leu ccac ttc ttt ga ga ctt ttt	agc aac aac aac Ser Asn Asn Asn Asn A95 gag aaa cta gaa Glu Lys Leu Glu 510 tgg aaa cac gca Trp Lys His Ala 525 tct cac ctc cac Ser His Leu His cca gtt gag gtc Pro Val Glu Val 560 gga ttg aat aat Gly Leu Asn Asn 575 gtg tct cta aag the Leu Lys 590 t gag aag aag gtt Glu Lys Lys Val 605 t atg cgc ttt aat phe Asn Trp Ile 640 cc cac tac ctt tgg at 640 cc cac tac ctt tgg at 640 cc cac tac ctt tgat aca 650 cc cac tac aca 650 cc cac tac ctt tgat aca 650 cc cac tac aca 650 cc cac tac ctt tgat aca 650 cc cac 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aat acc ag te Phe Met Ile Asn Thr Ser	agc aac aac aac ata gcc aac Ser Asn Asn Asn Ile Ala Asn 495 gag aaa cta gaa att ctc gat Glu Lys Leu Glu Ile Leu Asp 510 tgg aaa cac gca aac cct ggt Pro Gly 525 tct cac ctc cac atc ctt aac Ser His Leu His Ile Leu Asn 545 cca gtt gag gtc ttc aag gat Pro Val Glu Val Phe Lys Asp 560 gga ttg aat aat tta aac aca Gly Leu Asn Asn Leu Asn Thr 575 gtg tct cta aag tca ttg aac Asn 595 gag aag aag gtt ttc ggg cca Asn Thr 6610 t atg cgc ttt aat ccc ttt gat Asn 625 t gtt aat tgg att aac aca gag acc This Tyr Leu Cys Asn Thr Pro 655 ga ctt ttt gat aca tca tct tgc aac act ctt tgc aac act ctt tgc acc act ttt gat acc act ttt ttt gat acc act acc act ttt ttt gat acc act acc act ttt gat acc act ttt gat acc act acc acc	agc aac aac aac ata gcc aac ata 495 gag aaa cta gaa att ctc gat ttg 510 tgg aaa cac gca aac cct ggt ggt Trp Lys His Ala Asn Pro Gly Gly 525 tct cac ctc cac atc ctt aac ttg Ser His Leu His Ile Leu Asn Leu 545 cca gtt gag gtc ttc aaag gat tta Phe Lys Asp Leu 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Asn	agc aac aac aac ata gcc aac ata aat gat gac atg ttg gag Ser Asn Asn Asn Ile Ala Asn Ile Asn Asn Asn Asn Asn Ile Ala Asn Ile Asn Asn Asn Asn Asn Ile Ala Asn Ile Asn Asn Asn Asn Asn Asn Ile Ala Asn Ile Asn Asn Asn Asn Asn Asn Ile Glu Ile Leu Asn Leu Gln His Asn Asn Leu Ala 510 tgg aaa cac gca aac cct ggt ggt ccc att tat ttc cta aag Trp Lys His Ala Asn Pro Gly Gly Pro Ile Tyr Phe Leu Lys 525 tct cac ctc cac atc ctt aac ttg gag tcc ac ggt tt ggt cac as ggc ttt gac Ser His Leu His Ile Leu Asn Leu Glu Ser Asn Gly Phe Asp 545 cca gtt gag gtc ttc aag gat tta ttt gaa cta aag atc atc ac ggc ttt agc Ser His Leu Asn Leu Asn Thr Fro Pro Ala Ser Val Phe Asn 570 gga ttg aat aat tta aac aca ctt cac gca tct gtc tt aat be and as acc ac ser cac gag tt a cac ggc tt acc acc gca tt gag ggt ct as a gg gt ggt ct ct aag aac ct acc acc gca tt gag ggt ct acc acc gca tt gag ggt ggt ct ct aag acc ct acc acc acc gca tt gag acc acc gca tt gag acc acc gca tt gag ggt ggt ct ct acc acc acc gca tt gag acc acc gca tt 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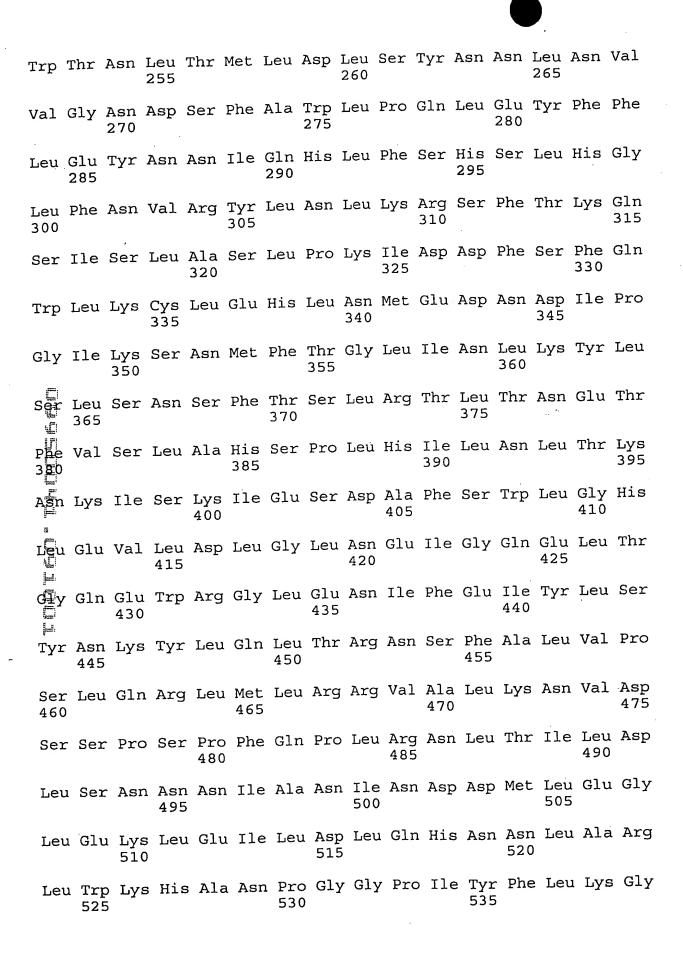
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gt Va: 86	l Glr	g aaa 1 Ly:	a gaa s Glu	a cgg	g ata g Ile 86	e GTZ	gco Ala	c ttt a Phe	cgt Arg	cat g His 870	יעם כ	a tt <u>q</u> s Lei	g caa ı Glr	a gta n Val	a gca L Ala 875	2688
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Leu Ser His Leu His Ile Leu Asn Leu Glu Ser Asn Gly Phe Asp Glu Ile Pro Val Glu Val Phe Lys Asp Leu Phe Glu Leu Lys Ile Ile Asp Leu Gly Leu Asn Asn Leu Asn Thr Leu Pro Ala Ser Val Phe Asn Asn Gln Val Ser Leu Lys Ser Leu Asn Leu Gln Lys Asn Leu Ile Thr Ser Val Glu Lys Lys Val Phe Gly Pro Ala Phe Arg Asn Leu Thr Glu Leu Asp Met Arg Phe Asn Pro Phe Asp Cys Thr Cys Glu Ser Ile Ala Trp Phe Val Asn Trp Ile Asn Glu Thr His Thr Asn Ile Pro Glu Leu Ser Ser His Tyr Leu Cys Asn Thr Pro Pro His Tyr His Gly Phe Pro Val Arg Leu Phe Asp Thr Ser Ser Cys Lys Asp Ser Ala Pro Phe Glu Leu The Phe Met Ile Asn Thr Ser Ile Leu Leu Ile Phe Ile Phe Ile Val Leu Ile His Phe Glu Gly Trp Arg Ile Ser Phe Tyr Trp Asn Val Ser Val His Arg Val Leu Gly Phe Lys Glu Ile Asp Arg Gln Thr Glu Gln Phe Glu Tyr Ala Ala Tyr Ile Ile His Ala Tyr Lys Asp Lys Asp Trp Val Trp Glu His Phe Ser Ser Met Glu Lys Glu Asp Gln Ser Leu Lys Phe Cys Leu Glu Glu Arg Asp Phe Glu Ala Gly Val Phe Glu Leu Glu Ala Ile Val Asn Ser Ile Lys Arg Ser Arg Lys Ile Ile Phe Val Ile Thr His His Leu Leu Lys Asp Pro Leu Cys Lys Arg Phe Lys Val His His Ala Val Gln Gln Ala Ile Glu Gln Asn Leu Asp Ser Ile Ile

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 Las Asn Leu Asp Leu Ser Phe Asn Pro Leu Arg His Leu Gly Ser Tyr
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100 105 110

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Thr	His	Thr	Arg 420	Val	Ala	Pne	Asn	425	116	FIIC	ASII	ggc Gly	430	DCI		1296
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ct Le	c aa u As:	t ca n Hi 51	s Il	a ate	g act	t tco r Se:	c aa r Ly 52	з гу	a caq s Glr	g gaa n Gli	a cta u Lei	a cag u Glr 525	1 1177	tti s Ph	cca e Pro	1584
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(I)	gaə Glı	ı ggs ı Gly	g gtg y Val 660	l Pro	cca Pro	ttt Phe	cag Gln	ctc Leu 665	L Cys	ctt Leu	cac His	tac Tyr	: aga : Arc 67(ı gac J Ası)	ttt Phe	2016
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cgo Arg 705	g Tr	g tg p Cy	t ate s Il	c tt e Ph	t gaa e Gli 71	u Tyi	; gaç r Glı	j att u Il€	: gct e Al:	t cag a Gli 71	11 1111	s tgg r Trj	g caq p Gl:	g tt n Ph	t ctg e Leu 720)
ago Se:	c ag r Se	t cg r Ar	t gc g Al	t gg a Gl 72	y II	c ato	e tto	c att e Il	t gto e Va 73	ישני גי	g caq u Gl:	g aa n Ly	g gt s Va	g ga 1 Gl 73	g aag u Lys 15	
ac Th	c ct r Le	g ct u Le	.c ag eu Ar	ıg ca :g Gl	g ca n Gl	g gt n Va	g ga 1 Gl	g ct u Le	g ta u Ty	c cg r Ar	c ct g Le	t ct u Le	c ag :u Se	c ag r Ar	gg aac cg Asr	2256 n

745 750

740

act tac ctg gag tgg gag gac agt gtc ctg ggg cgg cac atc ttc tgg 2304 Thr Tyr Leu Glu Trp Glu Asp Ser Val Leu Gly Arg His Ile Phe Trp 755 aga cga ctc aga aaa gcc ctg ctg gat ggt aaa tca tgg aat cca gaa 2352 Arg Arg Leu Arg Lys Ala Leu Leu Asp Gly Lys Ser Trp Asn Pro Glu 780 775 770 gga aca gtg ggt aca gga tgc aat tgg cag gaa gca aca tct atc tga 2400 Gly Thr Val Gly Thr Gly Cys Asn Trp Gln Glu Ala Thr Ser Ile 790 785 <210> 8 <211> 799 <212> PRT <213> Unknown Met Glu Leu Asn Phe Tyr Lys Ile Pro Asp Asn Leu Pro Phe Ser Thr 10 Lys Asn Leu Asp Leu Ser Phe Asn Pro Leu Arg His Leu Gly Ser Tyr 25 Ser Phe Phe Ser Phe Pro Glu Leu Gln Val Leu Asp Leu Ser Arg Cys Ghu Ile Gln Thr Ile Glu Asp Gly Ala Tyr Gln Ser Leu Ser His Leu 55 45 50 Ser Thr Leu Ile Leu Thr Gly Asn Pro Ile Gln Ser Leu Ala Leu Gly 70 **6**5 Ala Phe Ser Gly Leu Ser Ser Leu Gln Lys Leu Val Ala Val Glu Thr انطا 90 Asn Leu Ala Ser Leu Glu Asn Phe Pro Ile Gly His Leu Lys Thr Leu 110 105 Lys Glu Leu Asn Val Ala His Asn Leu Ile Gln Ser Phe Lys Leu Pro 125 120 115 Glu Tyr Phe Ser Asn Leu Thr Asn Leu Glu His Leu Asp Leu Ser Ser 135 130 Asn Lys Ile Gln Ser Ile Tyr Cys Thr Asp Leu Arg Val Leu His Gln 160 155 150 Met Pro Leu Leu Asn Leu Ser Leu Asp Leu Ser Leu Asn Pro Met Asn 175 170 165

Phe	Ile	Gln	Pro 180	Gly	Ala	Phe	Lys	Glu 185	Ile	Arg	Leu	His	Lys 190	Leu	THE
		195					200							Ile	
_	210					215								Phe	
225					230					233	·			Gly	
_				245					230					Tyr 255	
			260					203						Ser	
Phe	Ser	Leu 275	Val	Ser	Val	Thr	Ile 280	Glu	Arg	Val	Lys	Asp 285	Phe	Ser	Tyr
⊑ Asñ ⊈			Trp	Gln	His	Leu 295	Glu	Leu	Val	Asn	Cys 300	Lys	Phe	Gly	Gln
U Phe 3 0 5		Thr	Leu	Lys	Leu 310	Lys	Ser	Leu	Lys	Arg 315	Leu	Thr	Phe	Thr	Ser 320
A ş r	Lys	s Gly	y Gly	7 Asn 325	Ala	Phe	e Ser	Glu	Val 330	. Asp	Leu	Pro	Ser	Leu 335	Glu
Pbe	e Lev	ı Asp	Lev 340	ı Ser	Arg	Asr	ı Gly	Let 345	ı Ser	? Phe	e Lys	Gly	7 Cys 350	Cys	Ser
G₽	ı Se:	r Asj 35	p Phe 5	e Gly	/ Thr	Thi	Sei 360	Leu	ı Lys	з Туг	Lev	Asp 365	Leu 5	Ser	Phe
Ası	n Gl	y Va 0	1 Il	e Thi	r Met	Ser 37!	r Se: 5	c Ası	n Phe	e Lei	Gly 380	y Let)	ı Glu	ı Glr	Leu
38	5				390)				J J .			•	·	Phe 400
				40	5					•					His 5
Th	r Hi	s Th	r Ar 42	g Va 0	l Ala	a Ph	e As	n Gl 42	y Il 5	e Ph	e As	n Gl	y Lei 43	ı Sei O	r Ser
		43	35				44	. 0							e Leu
Pr	o As		le Ph	ne Th	ır Gl	u Le 45	eu Ar 55	g As	n Le	eu Th	r Ph 46	e Le 0	u As	p Le	u Sei

Gln C 465					470					1,5					
Ser L				485				,	470			•			
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Leu A		His 515	Ile	Met	Thr	Ser	Lys 520	Lys	Gln	Glu	Leu	Gln 525	His	Phe	Pro
Ser S	Ser 530	Leu	Ala	Phe	Leu	Asn 535	Leu	Thr	Gln	Asn	Asp 540	Phe	Ala	Cys	Thr
Cys (Glu	His	Gln	Ser	Phe 550	Leu	Gln	Trp	Ile	Lys 555	Asp	Gln	Arg	Gln	Leu 560
Leu '	Val	Glu	Val	Glu 565	Arg	Met	Glu	Cys	Ala 570	Thr	Pro	Ser	Asp	Lys 575	Gln
Gl¥∷ U	Met	Pro	Val 580	Leu	Ser	Leu	Asn	Ile 585	Thr	Cys	Gln	Met	Asn 590	Lys	Thr
II	Ile	Gly 595		. Ser	· Val	. Lev	Ser 600	Val	Lev	ı Val	. Val	Ser 605	Val	Val	Ala
va ^T	Leu 610	Va]	Туз	. Lys	s Phe	Tyr 615	Phe	His	. Lev	ı Met	Leu 620	Leu	Ala	Gly	Cys
I 1 e 625	Lys	Туз	c Gl	y Arg	g Gly 630	y Glu O	ı Asr	ı Ile	е Ту	r Asp 63	Ala 5	. Phe	· Val	Ile	Tyr 640
ser	Ser	Glı	n Asj	p Gli 64!	ı Ası 5	p Tr	o Val	L Arg	g As:	n Gli 0	u Lev	ı Val	. Lys	S Asr 659	Leu 5
Glu	Glu	Gl;	y Va 66	l Pro	o Pr	o Ph	e Glı	n Le	ս Су 5	s Le	u His	з Туз	67	g Asp	p Phe
Ile	Pro	Gl 67		l Al	a Il	e Al	a Al 68	a As O	n Il	e Il	e His	68!	u Gl;	y Pho	e His
Lys	Ser		g Ly	s Va	1 11	e Va 69	1 Va 5	l Va	l Se	r Gl	n Hi:	s Pho	e Il	e Gl	n Ser
Arg 705		э Су	s Il	e Ph	e Gl 71	u Ty .0	r Gl	u Il	e Al	.a Gl 71	n Th .5	r Tr	p Gl	n Ph	e Leu 720
Ser	Se:	r Ar	g Al	.a Gl 72	y Il 25	e Il	e Ph	e Il	.e Va 73	al L∈ 30	eu Gl	n Ly	s Va	1 Gl 73	u Lys 5
Thr	Le	u Le	eu Ar 74	rg G] 10	in Gl	tn Va	al Gl	u Le	eu Ty 15	yr Ai	rg Le	u Le	u Se 75	er Ar 50	g Asn

Thr Tyr Leu Glu Trp Glu Asp Ser Val Leu Gly Arg His Ile Phe Trp 760 755 Arg Arg Leu Arg Lys Ala Leu Leu Asp Gly Lys Ser Trp Asn Pro Glu 780 775 Gly Thr Val Gly Thr Gly Cys Asn Trp Gln Glu Ala Thr Ser Ile 795 790 785 <210> 9 <211> 1275 <212> DNA <213> Unknown <220> <223> Description of Unknown Organism:primate; surmised Homo sapiens <220> <221> CDS <222> (1)..(1095) LT) <套00> 9 tgt tgg gat gtt ttt gag gga ctt tct cat ctt caa gtt ctg tat ttg 48 Cys Trp Asp Val Phe Glu Gly Leu Ser His Leu Gln Val Leu Tyr Leu 15 10 <u>⊫</u>1 96 Asn His Asn Tyr Leu Asn Ser Leu Pro Pro Gly Val Phe Ser His Leu 20 act gca tta agg gga cta agc ctc aac tcc aac agg ctg aca gtt ctt 144 Thr Ala Leu Arg Gly Leu Ser Leu Asn Ser Asn Arg Leu Thr Val Leu 35 tct cac aat gat tta cct gct aat tta gag atc ctg gac ata tcc agg 192 Ser His Asn Asp Leu Pro Ala Asn Leu Glu Ile Leu Asp Ile Ser Arg 60 55 50 aac cag ctc cta gct cct aat cct gat gta ttt gta tca ctt agt gtc 240 Asn Gln Leu Leu Ala Pro Asn Pro Asp Val Phe Val Ser Leu Ser Val 70 65 ttg gat ata act cat aac aag ttc att tgt gaa tgt gaa ctt agc act 288 Leu Asp Ile Thr His Asn Lys Phe Ile Cys Glu Cys Glu Leu Ser Thr ttt atc aat tgg ctt aat cac acc aat gtc act ata gct ggg cct cct 336 Phe Ile Asn Trp Leu Asn His Thr Asn Val Thr Ile Ala Gly Pro Pro 110 105 100

gca Ala	Asp	ata Ile 115	tat Tyr	tgt Cys	gtg Val	tac Tyr	cct Pro 120	gac Asp	tcg Ser	ttc Phe	tct Ser	999 Gly 125	gtt Val	tcc Ser	ctc Leu	384	
Phe	Ser 130	Leu	Ser	Thr	Glu	135	Cys	Asp	Gı,u	Giu	140	gtc Val	пец	цур	DCI	432	
Leu 145	Lys	Phe	Ser	Leu	Phe 150	Ile	Val	Cys	Int	155		ctg Leu	TIIL	пец	160	480	
ctc Leu	atg Met	acc Thr	atc Ile	ctc Leu 165	aca Thr	gtc Val	aca Thr	aag Lys	ttc Phe 170	cgg Arg	ggc Gly	ttc Phe	tgt Cys	ttt Phe 175	atc Ile	528	
tgt Cys	tat Tyr	aag Lys	aca Thr 180	gcc Ala	cag Gln	aga Arg	ctg Leu	gtg Val 185	ttc Phe	aag Lys	gac Asp	cat His	ccc Pro 190	cag Gln	ggc Gly	576	
Thr	gaa Glu	cct Pro 195	gat Asp	atg Met	tac Tyr	aaa Lys	tat Tyr 200	gat Asp	gcc Ala	tat Tyr	ttg Leu	tgc Cys 205	FIIC	agc Ser	agc Ser	624	
Lys	Asp	ttc Phe	aca Thr	tgg Trp	gtg Val	cag Gln 215	aat Asn	gct Ala	ttg Leu	ctc Leu	aaa Lys 220	cac His	ctg Leu	gac Asp	act Thr	672	
Gln 225	Tyr	agt Ser	gac Asp	caa Gln	aac Asn 230	Arg	ttc Phe	aac Asn	ctg Leu	tgc Cys 235	Pile	gaa Glu	gaa Glu	aga Arg	gac Asp 240	720	
Phe	gtc Val	cca Pro	gga Gly	gaa Glu 245	Asn	cgc Arg	att Ile	gcc Ala	aat Asn 250	тте	cag Glr	gat Asp	gcc Ala	ato Ile 255	tgg Trp	768	
aac Asn	agt Ser	aga Arg	aag Lys 260	Ile	gtt Val	tgt Cys	ctt Leu	gtg Val 265	. ser	aga Arg	cac His	ttc Phe	ctt Leu 270		gat Asp	816	
ggo Gly	tgg Trp	tgc Cys 275	. Leu	gaa Glu	a gco ı Ala	ttc Phe	agt Ser 280	Ty	gcc Ala	caç Glr	n Gly	agg Arg 285	y Cyr	tta Lev	tct Ser	864	
gac As <u>r</u>	ctt Lev 290	ı Asr	agt Ser	gct Ala	cto a Lei	ato 1 Ile 295	e Mei	g gtg Val	g gtg L Val	g gtt L Val	gg9 1 Gl; 30	A Der	tto Lei	g tco ı Sei	c cag c Gln	912	
tac Ty:	c Gli	g ttg 1 Lei	g ato 1 Met	g aaa Lys	a cat s His	s Gli	a tce n Se:	c ato	c aga	a gg g Gly 31	y Pii	t gta e Va	a caq l Gli	g aaa n Ly:	cag Gln 320	960	
ca Gl:	g tai n Ty:	t ttg r Le	g agg u Arg	g tg g Tr	g cc p Pr	t gag o Gli	g ga u As	t ct p Le	c caq u Gl	g ga n As	t gt p Va	t gg 1 Gl	c tg y Tr	g tt p Ph	t ctt e Leu	1008	

	1056
cat aaa ctc tct caa cag ata cta aag aaa gaa aag gaa aag aag aaa His Lys Leu Ser Gln Gln Ile Leu Lys Lys Glu Lys Glu Lys Lys Lys 340 345 345	1056
gac aat aac att ccg ttg caa act gta gca acc atc tcc taatcaaagg Asp Asn Asn Ile Pro Leu Gln Thr Val Ala Thr Ile Ser 355 360 365	1105
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agcaatttcc aacttatees and	at 1225
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Ser His Asn Asp Leu Pro Ala Asn Leu Glu Ile Leu Asp Ile Ser Arg 55 60	3
Asn Gln Leu Leu Ala Pro Asn Pro Asp Val Phe Val Ser Leu Ser Val 65	1 0
Leu Asp Ile Thr His Asn Lys Phe Ile Cys Glu Cys Glu Leu Ser Th 85 90 95	r
Phe Ile Asn Trp Leu Asn His Thr Asn Val Thr Ile Ala Gly Pro Pr 100 105 110	O.
Ala Asp Ile Tyr Cys Val Tyr Pro Asp Ser Phe Ser Gly Val Ser Le 115 120 125	
Phe Ser Leu Ser Thr Glu Gly Cys Asp Glu Glu Glu Val Leu Lys Se 130 135	
Leu Lys Phe Ser Leu Phe Ile Val Cys Thr Val Thr Leu Thr Leu Ph	1e 50

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Leu Met Thr Ile Leu Thr Val Thr Lys Phe Arg Gly Phe Cys Phe Ile
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                165
Cys Tyr Lys Thr Ala Gln Arg Leu Val Phe Lys Asp His Pro Gln Gly
            180
Thr Glu Pro Asp Met Tyr Lys Tyr Asp Ala Tyr Leu Cys Phe Ser Ser
                                                 205
Lys Asp Phe Thr Trp Val Gln Asn Ala Leu Leu Lys His Leu Asp Thr
                                             220
    210
Gln Tyr Ser Asp Gln Asn Arg Phe Asn Leu Cys Phe Glu Glu Arg Asp
                                         235
                     230
225
Phe Val Pro Gly Glu Asn Arg Ile Ala Asn Ile Gln Asp Ala Ile Trp
                                     250
Asn Ser Arg Lys Ile Val Cys Leu Val Ser Arg His Phe Leu Arg Asp
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Gly Trp Cys Leu Glu Ala Phe Ser Tyr Ala Gln Gly Arg Cys Leu Ser
                             280
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Asp Leu Asn Ser Ala Leu Ile Met Val Val Val Gly Ser Leu Ser Gln
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 Tyr Gln Leu Met Lys His Gln Ser Ile Arg Gly Phe Val Gln Lys Gln
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     Tyr Leu Arg Trp Pro Glu Asp Leu Gln Asp Val Gly Trp Phe Leu
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                  325
 His Lys Leu Ser Gln Gln Ile Leu Lys Lys Glu Lys Lys Lys
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Asa L	Leu	acc Thr 45	ctc Leu	acc Thr	att Ile	aac Asn	cac His 50	ata Ile	cca Pro	gac Asp	atc Ile	tcc Ser 55	cca Pro	gcg Ala	tcc Ser	240	
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gta Val Võ	Pro	att Ile	cca Pro	ctg Leu	80 999	tca Ser	aaa Lys	aac Asn	aac Asn	atg Met 85	Cys	atc Ile	aag Lys	agg Arg	ctg Leu 90	336	
cag Gli	att Ile	aaa Lys	ccc Pro	aga Arg 95	Ser	ttt Phe	agt Ser	gga Gly	ctc Leu 100	Inr	tat Tyr	tta Leu	aaa Lys	tcc Ser 105	ctt Leu	384	
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ago Sei	tta Leu	cag Gln 125	Lev	ctc Leu	ago Ser	ctt Leu	gag Glu 130	(Ата	aac Asn	aac Asn	ato lle	ttt Phe 135	Ser	atc Ile	aga Arg	480	
aaa Lys	a gag s Glu 140	ı Asr	cta Leu	a aca ı Thr	gaa Glu	ctg Lev 145	I Ala	aac Asn	ata Ile	gaa Glu	ata 11e 150	ne n	tac Tyr	ctg Leu	Gly ggc	528	
caa Gli 15!	n Asr	tgt i Cys	tat Tyi	tat r Tyr	cga Arg	g Asr	cct Pro	tgt Cys	tat Tyi	gtt Val	r ser	tat Tyr	tca Ser	ata : Ile	gag Glu 170	576	i
aa	a gat	gc.	e tto	c cta	a aac	c ttg	g aca	a aag	g tta	a aaa	a gtg	g cto	tco	c cts	g aaa	624	Ļ

Lys	Asp	Ala	Phe	Leu 175	Asn	Leu	Thr	Lys	Leu 180	Lys	Val	Leu	Ser	Leu 185	Lys	
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gaa Glu	cta Leu	tat Tyr 205	ctc Leu	tac Tyr	aac Asn	aac Asn	atg Met 210	att Ile	gca Ala	aaa Lys	atc Ile	caa Gln 215	gaa Glu	gat Asp	gat Asp	720
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cct Pro 235	cgt Arg	tgt Cys	tat Tyr	aat Asn	gcc Ala 240	cca Pro	ttt Phe	cct Pro	tgt Cys	gcg Ala 245	ccg Pro	tgt Cys	aaa Lys	aat Asn	aat Asn 250	816
tct See	ccc Pro	cta Leu	cag Gln	atc Ile 255	cct Pro	gta Val	aat Asn	gct Ala	ttt Phe 260	gat Asp	gcg Ala	ctg Leu	aca Thr	gaa Glu 265	tta Leu	864
4	gtt Val	tta Leu	cgt Arg 270	Leu	cac His	agt Ser	aac Asn	tct Ser 275	ctt Leu	cag Gln	cat His	gtg Val	ccc Pro 280	cca Pro	aga Arg	912
F	ttt Phe	aag Lys 285	Asn	atc Ile	aac Asn	aaa Lys	ctc Leu 290	cag Gln	gaa Glu	ctg Leu	gat Asp	ctg Leu 295	tcc Ser	caa Gln	aac Asn	960
. afi	ttg Leu 300	Ala	aaa Lys	gaa Glu	att Ile	305 305	Asp	gct Ala	aaa Lys	ttt Phe	ctg Leu 310	UIS	ttt Phe	ctc Leu	ccc Pro	1008
aģc Ser 315	Leu	Ile	Gln	. Leu	gat Asp 320	Leu	Ser	Pne	ASI	325	GIU	теи	GIII	val	330	1056
Arg	Ala	Ser	Met	335	Leu	Ser	GIN	I Ala	340) Ser	. ser	пес	r nys	345		1104
Lys	: Ile	e Lev	350	g Il∈	e Arg	, GLY	r Tyr	355)	з пув	GI.	шес	360)	ttt Phe	1152
Asr	ı Leı	365	r Pro	o Lev	ı His	s Asr	т ьеч 370)	l ASI	ı ne	ı Gı	37!	Б	r voř	ctt Leu	1200
ggo	act Thi	r Ası	c tti n Phe	t ata e Ile	a aaa e Lys	a att s Ile 389	S ATS	a Ası	c cto n Le	c ago u Se:	c ato Met 390	- E110	t aaa e Lys	a caa s Glr	ttt n Phe	1248

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agt Ser 475	aaa Lys	aat Asn	agt Ser	ata Ile	ttt Phe 480	ttt Phe	gtc Val	aag Lys	tcc Ser	tct Ser 485	ASP	ttt Phe	cag Gln	cat His	ctt Leu 490	1536
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Lēv ļ	aat Asn	ggo Gl	agt Ser 510	Glu	ttc Phe	caa Gln	cct Pro	tta Leu 515	Ala	gag Glu	g cto ı Lev	g aga n Arg	tat Tyr 520	200	gac Asp	1632
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ctt Lei	cac His	s Ly:	a cto s Le	g gaa ı Glı	ı gtt ı Val	cto Lev 545	I Wal	ata o Ile	a ago e Sei	agt Se:	t aat r Asi 55		c cat	tat Tyr	ttt Phe	1728
caa Gli 55	n Se	a ga r Gl	a gg u Gl	a att y Ile	act Thi	c His	ate	g cta t Le	a aad ı Ası	tt n Ph 56	C 111	c aag r Lys	g aad s Asi	c cta n Lev	a aag 1 Lys 570	1776
gt Va	t ct l Le	g ca u Gl	g aa n Ly	a cto s Lev 57	u Me	g ato	g aa t As	c ga n As	c aa p As: 58	II AS	c at p Il	c tc e Se	t tco r Se:	c tco r Se: 58!	acc r Thr	1824
ag Se	c ag r Ar	g ac g Th	c at ir Me 59	t GI	g ag u Se	t ga r Gl	g tc u Se	t ct r Le 59	u AI	a ac g Th	t ct ir Le	g ga u Gl	a tt u Ph 60		a gga g Gly	1872

aat Asn	cac His	tta Leu 605	gat Asp	gtt Val	tta Leu	Trp	aga Arg 610	gaa Glu	ggt Gly	gat Asp	aac Asn	aga Arg 615	TAT	tta Leu	caa Gln	1920
tta Leu	ttc Phe 620	aag Lys	aat Asn	ctg Leu	cta Leu	aaa Lys 625	tta Leu	gag Glu	gaa Glu	tta Leu	gac Asp 630	atc Ile	tct Ser	aaa Lys	aat Asn	1968
tcc Ser 635	cta Leu	agt Ser	ttc Phe	ttg Leu	cct Pro 640	tct Ser	gga Gly	gtt Val	ttt Phe	gat Asp 645	ggt Gly	atg Met	cct Pro	cca Pro	aat Asn 650	2016
cta Leu	aag Lys	aat Asn	ctc Leu	tct Ser 655	ttg Leu	gcc Ala	aaa Lys	aat Asn	ggg 660	ctc Leu	aaa Lys	tct Ser	ttc Phe	agt Ser 665	tgg Trp	2064
aag Lys	aaa Lys	ctc Leu	cag Gln 670	tgt Cys	cta Leu	aag Lys	aac Asn	ctg Leu 675	gaa Glu	act Thr	ttg Leu	gac Asp	ctc Leu 680	agc Ser	cac His	2112
aae Asa	caa Gln	ctg Leu 685	acc Thr	act Thr	gtc Val	cct Pro	gag Glu 690	aga Arg	tta Leu	tcc Ser	aac Asn	tgt Cys 695	tcc Ser	aga Arg	agc Ser	2160
	Lys	Asn	ctg Leu	att Ile	ctt Leu	aag Lys 705	aat Asn	aat Asn	caa Gln	atc Ile	agg Arg 710	agt Ser	ctg Leu	acg Thr	aag Lys	2208
į.	ttt Phe	cta Leu	caa Gln	gat Asp	gcc Ala 720	ttc Phe	cag Gln	ttg Leu	cga Arg	tat Tyr 725	пеп	gat Asp	ctc Leu	agc Ser	tca Ser 730	2256
Asr	aaa Lys	ato Ile	cag Gln	atg Met 735	Ile	caa Gln	aag Lys	acc Thr	ser	PHE	cca Pro	, GIU	aat Asn	gto Val 745	ctc Leu	2304
aac Asr	aat n Asn	ctg Lev	aag Lys 750	: Met	ttg Leu	ctt Leu	ttg Leu	cat His 755	s HIS	aat Asr	cgg Arg	g ttt g Phe	ctg Leu 760	. Cya	acc Thr	2352
tgt Cys	gat s Asp	get Ala 765	ı Val	g tgg Trp	g ttt o Phe	gto Val	tgg Trp	rr	g gtt o Val	aac Asr	cat His	acg Thr 775	. Git	gto Val	act Thr	2400
at! Ile	c cct e Pro 780	о Туз	c cto	g gco ı Ala	c aca a Thr	gat Asg 785	val	g act	tgt c Cys	gtg Val	999 1 Gly 790	A PTC	a' gga o Gly	a gca 7 Ala	a cac a His	2448
aa Ly 79	s Gl	c caa y Gli	a agt n Se:	t gto	g ato l Ile 800	e Se	c cto Lei	g gat ı Asj	t cto p Lei	g tad u Ty: 80!	r 111	c tgi r Cyi	z gag s Gli	g tta ı Len	a gat ı Asp 810	2496
ct Le	g ac u Th	t aa r As:	c cto	g at u Il	t cto e Le	g tto u Pho	c tca e Se:	a ct c Le	t tco u Se:	c at	a tc e Se	t gta	a tc l Se:	t ctor r Le	c ttt u Phe	2544

815 820 . 825

				812					020							
ctc Leu	atg Met	gtg Val	atg Met 830	atg Met	aca Thr	gca Ala	agt Ser	cac His 835	ctc Leu	tat Tyr	ttc Phe	tgg Trp	gat Asp 840	gtg Val	tgg Trp	2592
tat Tyr	att Ile	tac Tyr 845	cat His	ttc Phe	tgt Cys	aag Lys	gcc Ala 850	aag Lys	ata Ile	aag Lys	gjå aaa	tat Tyr 855	cag Gln	cgt Arg	cta Leu	2640
ata Ile	tca Ser 860	cca Pro	gac Asp	tgt Cys	tgc Cys	tat Tyr 865	gat Asp	gct Ala	ttt Phe	att Ile	gtg Val 870	tat Tyr	gac Asp	act Thr	aaa Lys	2688
gac Asp 875	cca Pro	gct Ala	gtg Val	acc Thr	gag Glu 880	tgg Trp	gtt Val	ttg Leu	gct Ala	gag Glu 885	ctg Leu	gtg Val	gcc Ala	aaa Lys	ctg Leu 890	2736
Glu	gac Asp	cca Pro	aga Arg	gag Glu 895	aaa Lys	cat His	ttt Phe	aat Asn	tta Leu 900	tgt Cys	ctc Leu	gag Glu	gaa Glu	agg Arg 905	gac Asp	2784
Trip	tta Leu	cca Pro	999 Gly 910	cag Gln	cca Pro	gtt Val	ctg Leu	gaa Glu 915	aac Asn	ctt Leu	tcc Ser	cag Gln	agc Ser 920	ata Ile	cag Gln	2832
ct£ L ¢ u	agc Ser	aaa Lys 925	Lys	aca Thr	gtg Val	ttt Phe	gtg Val 930	мет	aca Thr	gac Asp	aag Lys	tat Tyr 935	Ala	aag Lys	act Thr	2880
gaa Glu	aat Asn 940	Phe	aag Lys	ata Ile	gca Ala	ttt Phe 945	Tyr	ttg Leu	tcc Ser	cat His	cag Gln 950	ALG	ctc Leu	atg Met	gat Asp	2928
	Lys	gtt Val	gat Asp	gtg Val	att Ile 960	: Ile	ttg Leu	ı ata ı Ile	ttt Phe	ctt Leu 965	t GIU	aag Lys	ccc Pro	ttt Phe	cag Gln 970	2976
aag Lys	tcc Ser	aag Lys	tto Phe	cto Leu 975	Glr	g cto Lev	c cgg L Arg	j aaa j Lys	agg Arg 980	1 rec	tgt LCys	ggs Gly	g agt r Ser	tct Ser 985	gtc Val	3024
ctt Leu	gag Glu	g tgg ı Tr <u>p</u>	g cca Pro 990) Thr	aac Asr	c ccg	g caa Glr	a gct n Ala 995	HIE	c cca s Pro	a tac o Tyr	tto Phe	tgg Trp	, 611	g tgt 1 Cys	3072
cta Lev	i aag 1 Lys	g aad S Asi 100!	n Ala	c cto a Lei	g gco 1 Ala	c aca	a gad c Asp 1010	O ASI	cat n His	gto Val	g gco l Ala	tai a Ty: 101	r 261	caç Glı	g gtg 1 Val	3120
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<212> PRT

<213> Unknown

<400> 12

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Asp Lys His Leu Thr Glu Ile Pro Gly Gly Ile Pro Thr Asn Thr Thr 30

Asn Leu Thr Leu Thr Ile Asn His Ile Pro Asp Ile Ser Pro Ala Ser 50

Phe His Arg Leu Asp His Leu Val Glu Ile Asp Phe Arg Cys Asn Cys 65

Val Pro Ile Pro Leu Gly Ser Lys Asn Asn Met Cys Ile Lys Arg Leu 80 75

din Ile Lys Pro Arg Ser Phe Ser Gly Leu Thr Tyr Leu Lys Ser Leu 100

Tyr Leu Asp Gly Asn Gln Leu Leu Glu Ile Pro Gln Gly Leu Pro Pro 115 110

Ser Leu Gln Leu Leu Ser Leu Glu Ala Asn Asn Ile Phe Ser Ile Arg 135 130 125

Lys Glu Asn Leu Thr Glu Leu Ala Asn Ile Glu Ile Leu Tyr Leu Gly 150 145 140

Gln Asn Cys Tyr Tyr Arg Asn Pro Cys Tyr Val Ser Tyr Ser Ile Glu 165 160 155

Lys Asp Ala Phe Leu Asn Leu Thr Lys Leu Lys Val Leu Ser Leu Lys 185 180 175

Asp Asn Asn Val Thr Ala Val Pro Thr Val Leu Pro Ser Thr Leu Thr 200 195 190

Glu Leu Tyr Leu Tyr Asn Asn Met Ile Ala Lys Ile Gln Glu Asp Asp 215 210 205

Phe Asn Asn Leu Asn Gln Leu Gln Ile Leu Asp Leu Ser Gly Asn Cys

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Ser	Pro	Leu	Gln	Ile 255	Pro	Val	Asn	Ala	Phe 260	Asp	Ala	Leu	Thr	Glu 265	Leu
Lys	Val	Leu	Arg 270	Leu	His	Ser	Asn	Ser 275	Leu	Gln	His	Val	Pro 280	Pro	Arg
Trp	Phe	Lys 285	Asn	Ile	Asn	Lys	Leu 290	Gln	Glu	Leu	Asp	Leu 295	Ser	Gln	Asn
Phe	Leu 300	Ala	Lys	Glu	Ile	Gly 305	Asp	Ala	Lys	Phe	Leu 310	His	Phe	Leu	Pro
Ser 315	Leu	Ile	Gln	Leu	Asp 320	Leu	Ser	Phe	Asn	Phe 325	Glu	Leu	Gln	Val	Tyr 330
	Ala	Ser	Met	Asn 335	Leu	Ser	Gln	Ala	Phe 340	Ser	Ser	Leu	Lys	Ser 345	Leu
Lys	Ile	Leu	Arg 350	Ile	Arg	Gly	Tyr	Val 355	Phe	Lys	Glu	Leu	Lys 360	Ser	Phe
Asn	Leu	Ser 365	Pro	Leu	His	Asn	Leu 370	Gln	Asn	Leu	Glu	Val 375	Leu	Asp	Leu
¶ ⊈	Thr 380		Phe	Ile	Lys	Ile 385	Ala	Asn	Leu	Ser	Met 390	Phe	Lys	Gln	Phe
Lys 195		Leu	Lys	Val	Ile 400	Asp	Leu	Ser	· Val	. Asn 405	Lys	Ile	. Ser	Pro	Ser 410
Gly	Asp	Ser	Ser	Glu 415	Val	Gly	Phe	Cys	Ser 420	Asr	n Ala	Arg	Thr	Ser 425	Val
Glu	. Ser	Туг	Glu 430		Gln	. Val	. Lev	Glu 435	ı Glr	ı Leı	ı His	з Туг	Phe 440	e Arg	Tyr
Asp	Lys	Ty:		a Arc	g Ser	Cys	450	J Ph∈	e Lys	s Asr	ı Lys	Gl: 45	ı Ala	a Ser	Phe
Met	Ser 460		l Asr	ı Glu	ı Ser	Cys 465	з Туг 5	Lys	з Ту	r Gly	y Glr 470	n Thi	r Lei	ı Asp	Lev
Se:		s Ası	n Sei	r Ile	e Phe 480	Phe	e Val	L Ly:	s Se	r Se:	r Ası	o Pho	e Glı	n His	490
Se	r Phe	e Le	u Ly	s Cy:	s Lei	ı Ası	n Lev	ı Se:	r Gl 50	y As: 0	n Le	u Il	e Se	r Gl: 50!	n Thi

			510					515							
		525					Leu 530								
	540					545	Asp								
555					560		Met			505					
				575			Asn		500						
			590				Ser								
		605	,				Arg 610								
Le ų	Phe 620	Lys	s Asr	ı Leu	Leu	Lys 625	Leu	Glu	Glu	Leu	Asp 630	Ile	Ser	Lys	Asn
63E	į	ı Sei	r Phe	e Lev	Pro 640	Ser	Gly	Val	Phe	Asp 645	Gly	Met	Pro	Pro	Asn 650
		a Ası	n Lev	ນ Ser 655	Lev	ı Ala	a Lys	Asn	Gly 660	, Leu)	Lys	Ser	Phe	Ser 665	Trp
Ly		s Le	u Gl: 67	n Cys	s Lev	ı Lys	s Asr	1 Leu 675	ı Glu	ı Thr	Lev	a Asp	680	Ser	His
ASI	Gl:	n Le 68	u Th 5	r Th	r Va	l Pro	o Glu 690	ı Arg	g Let	Sei	c Asr	n Cys 695	s Ser	Arg	ßer
Le	' u Ly 70		n Le	u Il	e Le	u Ly 70	s Ası 5	n Ası	n Gl	n Ile	e Arg 710	g Sei	r Lei	ı Thi	. Lys
Ту 71		e Le	u Gl	n As	p Al 72	a Ph 0	e Gl	n Le	u Ar	g Ty:	r Lei 5	u As	p Let	ı Sei	r Ser 730
		s Il	e Gl	n Me. 73	t Il	e Gl	n Ly	s Th	r Se 74	r Ph 0	e Pr	o Gl	u As	n Va 74	l Leu 5
As	n As	sn L€	eu Ly 75	ys Me 50	t Le	u L∈	eu Le	u Hi 75	s Hi 5	s As	n Ar	g Ph	e Le 76	и Су 0	s Thr
СУ	s As	sp A. 70	la Va 65	al Tı	cp Ph	ne Va	al Tr 77	p Tr	p Va	al As	n Hi	s Th	ır Gl '5	u Va	l Thi
·II	Le Pi	ro T	yr L	eu A	la Tì	nr As	sp Va 85	al Th	ir Cy	ys Va	al Gl 79	y Pr 90	o Gl	y Al	a His

Lys Gly Gln Ser Val Ile Ser Leu Asp Leu Tyr Thr Cys Glu Leu Asp 805 795 Leu Thr Asn Leu Ile Leu Phe Ser Leu Ser Ile Ser Val Ser Leu Phe 820 815 Leu Met Val Met Met Thr Ala Ser His Leu Tyr Phe Trp Asp Val Trp 835 830 Tyr Ile Tyr His Phe Cys Lys Ala Lys Ile Lys Gly Tyr Gln Arg Leu 850 Ile Ser Pro Asp Cys Cys Tyr Asp Ala Phe Ile Val Tyr Asp Thr Lys Asp Pro Ala Val Thr Glu Trp Val Leu Ala Glu Leu Val Ala Lys Leu 885 880 875 Glu Asp Pro Arg Glu Lys His Phe Asn Leu Cys Leu Glu Glu Arg Asp 900 895 Leu Pro Gly Gln Pro Val Leu Glu Asn Leu Ser Gln Ser Ile Gln 915 Ser Lys Lys Thr Val Phe Val Met Thr Asp Lys Tyr Ala Lys Thr 935 930 925 GÍT Asn Phe Lys Ile Ala Phe Tyr Leu Ser His Gln Arg Leu Met Asp 950 945 940 G Lys Val Asp Val Ile Ile Leu Ile Phe Leu Glu Lys Pro Phe Gln 965 960 955 Lys Ser Lys Phe Leu Gln Leu Arg Lys Arg Leu Cys Gly Ser Ser Val 980 975 Leu Glu Trp Pro Thr Asn Pro Gln Ala His Pro Tyr Phe Trp Gln Cys 1000 995 990 Leu Lys Asn Ala Leu Ala Thr Asp Asn His Val Ala Tyr Ser Gln Val

1015

Phe Lys Glu Thr Val 1020

1005

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Mus musculus

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ctc tgc agg agc tct gtc ctt gag tgg cct gca aat cca cag gct cac
                                                                     96
Leu Cys Arg Ser Ser Val Leu Glu Trp Pro Ala Asn Pro Gln Ala His
                                  25
             20
cca tac ttc tgg cag tgc ctg aaa aat gcc ctg acc aca gac aat cat
                                                                     144
Pro Tyr Phe Trp Gln Cys Leu Lys Asn Ala Leu Thr Thr Asp Asn His
                              40
         35
                                                                     180
gtg gct tat agt caa atg ttc aag gaa aca gtc tag
Val Ala Tyr Ser Gln Met Phe Lys Glu Thr Val
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 Z.
<210> 14
 <211> 59
 <212> PRT
 <213> Unknown
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                                       10
 Leu Cys Arg Ser Ser Val Leu Glu Trp Pro Ala Asn Pro Gln Ala His
                                   25
              20
 Pro Tyr Phe Trp Gln Cys Leu Lys Asn Ala Leu Thr Thr Asp Asn His
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 Val Ala Tyr Ser Gln Met Phe Lys Glu Thr Val
                           55
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       Homo sapiens
<220>
  <221> CDS
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	-	195					200									
tta Leu	aga Arg 210	ggt Gly	tat Tyr	gtg Val	ttc Phe	cag Gln 215	gaa Glu	ctc Leu	aga Arg	gaa Glu	gat Asp 220	gat Asp	ttc Phe	cag Gln	ccc Pro	673
ctg Leu 225	atg Met	cag Gln	ctt Leu	cca Pro	aac Asn 230	tta Leu	tcg Ser	act Thr	TIE	aac Asn 235	ttg Leu	ggt Gly	att Ile	aat Asn	ttt Phe 240	721
att Ile	aag Lys	caa Gln	atc Ile	gat Asp 245	ttc Phe	aaa Lys	ctt Leu	ttc Phe	caa Gln 250	aat Asn	ttc Phe	tcc Ser	aat Asn	ctg Leu 255	gaa Glu	769
att Ile	att Ile	tac Tyr	ttg Leu 260	tca Ser	gaa Glu	aac Asn	aga Arg	ata Ile 265	tca Ser	ccg Pro	ttg Leu	gta Val	aaa Lys 270	gat Asp	acc Thr	817
cgg Arg	cag Gln	agt Ser 275	Tyr	gca Ala	aat Asn	agt Ser	tcc Ser 280	tct Ser	ttt Phe	caa Gln	cgt Arg	cat His 285	atc Ile	cgg Arg	aaa Lys	865
cgā Artg	cgc Arg 290	Ser	aca Thr	gat Asp	ttt Phe	gag Glu 295	ttt Phe	gac Asp	cca Pro	cat His	tcg Ser 300	11011	ttt Phe	tat Tyr	cat His	913
ttc Phe 305	Thr	cgt Arg	cct	tta Leu	ata Ile 310	Lys	cca Pro	caa Gln	tgt Cys	gct Ala 315	ALO	tat Tyr	gga Gly	aaa Lys	gcc Ala 320	961
tion [] [] [] [] [] [] [] [] [] [gat Asp 10> 3 11> 3	Leu 16 329	ı Ser	c ctc Leu 325	Asn	agt Ser	att Ile	ttc Phe	tt							990
<4(Ası				u Ile	e Ası	ı Lev	ı Lys	s Asr	ı Leu 10	ı Туз)	r Lei	ı Ala	a Tr	p Ası 1!	n Cys	
		e As:	n Ly: 2	s Vai	l Cys	s Glı	ı Lys	3 Thi 25	c Ası 5	n Ile	e Gl	u Asj	o Gl	y Va 0	l Phe	
Gl [.]	u Th	r Le		r Asi	n Le	u Glı	ı Let 40	ւ Lei 0	u Se:	r Le	u Se	r Pho	e As 5	n Se	r Leu	
	5	0				5	5				O	·			e Leu	
Se	r As	n Th	r Gl	n Il	e Ly	s Ty	r Il	e Se	r Gl	u Gl	u As	p Ph	е Ьу	rs Gl	y Leu	

Ile Asn Leu Thr Leu Leu Asp Leu Ser Gly Asn Cys Pro Arg Cys Phe Asn Ala Pro Phe Pro Cys Val Pro Cys Asp Gly Gly Ala Ser Ile Asn Ile Asp Arg Phe Ala Phe Gln Asn Leu Thr Gln Leu Arg Tyr Leu Asn Leu Ser Ser Thr Ser Leu Arg Lys Ile Asn Ala Ala Trp Phe Lys Asn Met Pro His Leu Lys Val Leu Asp Leu Glu Phe Asn Tyr Leu Val Gly Glu Ile Ala Ser Gly Ala Phe Leu Thr Met Leu Pro Arg Leu Glu Ile Lew Asp Leu Ser Phe Asn Tyr Ile Lys Gly Ser Tyr Pro Gln His Ile Ü Asi Ile Ser Arg Asn Phe Ser Lys Leu Leu Ser Leu Arg Ala Leu His Leu Arg Gly Tyr Val Phe Gln Glu Leu Arg Glu Asp Asp Phe Gln Pro Lew Met Gln Leu Pro Asn Leu Ser Thr Ile Asn Leu Gly Ile Asn Phe ITe Lys Gln Ile Asp Phe Lys Leu Phe Gln Asn Phe Ser Asn Leu Glu Ile Ile Tyr Leu Ser Glu Asn Arg Ile Ser Pro Leu Val Lys Asp Thr Arg Gln Ser Tyr Ala Asn Ser Ser Ser Phe Gln Arg His Ile Arg Lys Arg Arg Ser Thr Asp Phe Glu Phe Asp Pro His Ser Asn Phe Tyr His Phe Thr Arg Pro Leu Ile Lys Pro Gln Cys Ala Ala Tyr Gly Lys Ala Leu Asp Leu Ser Leu Asn Ser Ile Phe

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<221> misc feature
<222> (93)..(149)
<223> Xaa translation depends on genetic code
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                                                          15
                                      10
gac acc aaa gat gcc tct gtt act gac tgg gtg ata aat gag ctg cgc
                                                                    96
Asp Thr Lys Asp Ala Ser Val Thr Asp Trp Val Ile Asn Glu Leu Arg
             20
tac cac ctt gaa gag agc cga gac aaa aac gtt ctc ctt tgt cta gag
                                                                    144
Tyr His Leu Glu Glu Ser Arg Asp Lys Asn Val Leu Leu Cys Leu Glu
         35
gag agg gat tgg gac ccg gga ttg gcc atc atc gac aac ctc atg cag
                                                                    192
Gu Arg Asp Trp Asp Pro Gly Leu Ala Ile Ile Asp Asn Leu Met Gln
                          55
     50
ago ato aac caa ago aag aaa aca gta ttt gtt tta acc aaa aaa tat
                                                                    240
Ser Ile Asn Gln Ser Lys Lys Thr Val Phe Val Leu Thr Lys Lys Tyr
gca aaa agc tgg aac ttt aaa aca gct ttt tac ttg gsc ttg cag agg
                                                                    288
Ala Lys Ser Trp Asn Phe Lys Thr Ala Phe Tyr Leu Xaa Leu Gln Arg
                  85
cta atg ggt gag aac atg gat gtg att ata ttt atc ctg ctg gag cca
                                                                    336
Leu Met Gly Glu Asn Met Asp Val Ile Ile Phe Ile Leu Leu Glu Pro
                                 105
             100
gtg tta cag cat tct ccg tat ttg agg cta cgg cag cgg atc tgt aag
                                                                    384
Val Leu Gln His Ser Pro Tyr Leu Arg Leu Arg Gln Arg Ile Cys Lys
                             120
 agc tcc atc ctc cag tgg cct gac aac ccg aag gca gaa agg ttg ttt
                                                                     432
 Ser Ser Ile Leu Gln Trp Pro Asp Asn Pro Lys Ala Glu Arg Leu Phe
                                              140
                         135
     130
 tgg caa act ctg wga aat gtg gtc ttg act gaa aat gat tca cgg tat
                                                                     480
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Trp Gln Thr Leu Xaa Asn Val Val Leu Thr Glu Asn Asp Ser Arg Tyr 145 150 160

aac aat atg tat gtc gat tcc att aag caa tac taactgacgt taagtcatga 533 Asn Asn Met Tyr Val Asp Ser Ile Lys Gln Tyr 165 170

tttcgcgcca taataaagat gcaaaggaat gacatttcng tattagttat ctattgctan 593 ggtaacnaaa ttantcccaa aaancttang tnggtttnaa aacaacnaca ttntgctggn 653 cccacagttt ttgagggtca ggagtccagg cccagcataa ctgggtcttc tgcttcaggg 713 tgtctncaga ggctgcaatg taggtgttca ccagagacat aggcatcact ggggtcacac 773 tncatgtggt tgttttctgg attcaattcc tcctgggcta ttggccaaag gctatactca 833 tgtaagccat gcgagcctat cccacaangg cagcttgctt catcagagct agcaaaaaag 893 agaggttgct agcaagatga agtcacaatc ttttgtaatc gaatcaaaaa agtgatatct 953 catcactttg gccatattct atttgttaga agtaaaccac aggtcccacc agctccatgg 1013 gagtgaccac ctcagtccag ggaaaacagc tgaagaccaa gatggtgagc tctgattgct 1073 tragttggtc atcaactatt ttcccttgac tgctgtcctg ggatggccgg ctatcttgat 1133 ggatagattg tgaatatcag gaggccaggg atcactgtgg accatcttag cagttgacct 1193 aacacatctt cttttcaata tctaagaact tttgccactg tgactaatgg tcctaatatt 1253 aagctgttgt ttatatttat catatatcta tggctacatg gttatattat gctgtggttg 1313 agttcggttt tatttacagt tgcttttaca aatatttgct gtaacatttg acttctaagg 1373 tttagatgcc atttaagaac tgagatggat agcttttaaa gcatctttta cttcttacca 1433 ttttttaaaa gtatgcagct aaattcgaag cttttggtct atattgttaa ttgccattgc 1493 1557 aaaa

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<211> 171 <212> PRT

<213> Unknown

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Tyr His Leu Glu Glu Ser Arg Asp Lys Asn Val Leu Leu Cys Leu Glu
Glu Arg Asp Trp Asp Pro Gly Leu Ala Ile Ile Asp Asn Leu Met Gln
Ser Ile Asn Gln Ser Lys Lys Thr Val Phe Val Leu Thr Lys Lys Tyr
Ala Lys Ser Trp Asn Phe Lys Thr Ala Phe Tyr Leu Xaa Leu Gln Arg
                 85
Leu Met Gly Glu Asn Met Asp Val Ile Ile Phe Ile Leu Leu Glu Pro
Val Leu Gln His Ser Pro Tyr Leu Arg Leu Arg Gln Arg Ile Cys Lys
                                                  125
    Ser Ile Leu Gln Trp Pro Asp Asn Pro Lys Ala Glu Arg Leu Phe
                                              140
                         135
    130
Tro Gln Thr Leu Xaa Asn Val Val Leu Thr Glu Asn Asp Ser Arg Tyr
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                     150
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 Aşn Asn Met Tyr Val Asp Ser Ile Lys Gln Tyr
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                                                                     48
  Asn Glu Leu Ile Pro Asn Leu Glu Lys Glu Asp Gly Ser Ile Leu Ile
                                        10
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aac Asn 50	ttt Phe	gtc Val	cag Gln	aat Asn	gag Glu 55	tgg Trp	tgc Cys	cat His	tat Tyr	gaa Glu 60	ttc Phe	tac Tyr	ttt Phe	gcc Ala	192
cac His	aat Asn	ctc Leu	ttc Phe	cat His 70	gaa Glu	aat Asn	tct Ser	gat Asp	cay Xaa 75	ata Ile	att Ile	ctt Leu	atc Ile	tta Leu 80	240
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Ala	ctc Leu	Leu	Glu	aaa Lys	aaa Lys	gca Ala	тÀт	ttg Leu	gaa Glu	tgg Trp	ccc Pro	1 2	1105	agg Arg	336
aaa Lys	Cys	Gly	ctt Leu	ttc Phe	tgg Trp	Ala	ASII	ctt Leu	cga Arg	gct Ala	ALG	٠٠٠	aat Asn	gtt Val	384
gta Val	Let	gcc Ala	acc Thr	aga Arg	GIU	. Met	tat	gaa Glu	ctg Leu	. Ол.		ttc Phe	aca Thr	gag Glu	432
aat Asn	gaa Glu	a gaç ı Glu	tct Ser	Arg	GIY	tct Ser	aca Thr	ato : Ile	, 561	_ 1100	g at <u>c</u> 1 Met	g aga : Arg	a aca g Thr	gac Asp 160	480
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									•						629
	gta Val aac Asn 50 cac His gaa Glu gct Ala aaa Lys gta 130 aat 130 aat acatt	gta agc Val Ser 35 aac ttt Asn Phe 50 cac aat His Asn gaa ccc Glu Pro gct ctc Ala Leu aaa tgt Lys Cys 115 gta tta Val Leu 130 aat gaa Asn Glu cta taa	gta agc ttc Val Ser Phe 35 aac ttt gtc Asn Phe Val 50 cac aat ctc His Asn Leu gaa ccc att Glu Pro Ile gct ctc ctg Ala Leu Leu 100 aaa tgt ggg Lys Cys Gly 115 gta tta gcc Val Leu Ala 130 aat gaa gag Asn Glu Glu ccta taaaatc	gta agc ttc att Val Ser Phe Ile 35 aac ttt gtc cag Asn Phe Val Gln 50 cac aat ctc ttc His Asn Leu Phe gaa ccc att cca Glu Pro Ile Pro 85 gct ctc ctg gaa Ala Leu Leu Glu 100 aaa tgt ggg ctt Lys Cys Gly Leu 115 gta tta gcc acc Val Leu Ala Thr 130 aat gaa gag tct Asn Glu Glu Ser cta taaaatcca Leu acattgat acaacctt	gta agc ttc att gag Val Ser Phe Ile Glu 35 aac ttt gtc cag aat Asn Phe Val Gln Asn 50 cac aat ctc ttc cat His Asn Leu Phe His 70 gaa ccc att cca ttc Glu Pro Ile Pro Phe 85 gct ctc ctg gaa aaa Ala Leu Leu Glu Lys 100 aaa tgt ggg ctt ttc 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Val Ser Phe Ile Glu Lys Ser Tyr Lys Ser Ile Phe Val 35 aac ttt gtc cag aat gag tgg tgc cat tat gaa ttc tac Asn Phe Val Gln Asn Glu Trp Cys His Tyr Glu Phe Tyr 50 cac aat ctc ttc cat gaa aat tct gat cay ata att ctt His Asn Leu Phe His Glu Asn Ser Asp Xaa Ile Ile Leu 70 gaa ccc att cca ttc tat tgc att ccc acc agg tat cat Glu Pro Ile Pro Phe Tyr Cys Ile Pro Thr Arg Tyr His 90 gct ctc ctg gaa aaa aaa gca tac ttg gaa tgg tgc cat acc agg tat cat Glu Pro Ile Pro Phe Tyr Cys Ile Pro Thr Arg Tyr His 90 gct ctc ctg gaa aaa aaa gca tac ttg gaa tgg ccc aag Ala Leu Leu Glu Lys Lys Ala Tyr Leu Glu Trp Pro Lys 100 aaa tgt ggg ctt ttc tgg gca aac ctt cga gct gct gtt Lys Cys Gly Leu Phe Trp Ala Asn Leu Arg Ala Ala Val 115 gta tta gcc acc aga gaa atg tat gaa ctg cag aca ttc Val Leu Ala Thr Arg Glu Met Tyr Glu Leu Gln Thr Phe 130 aat gaa gag tct cga ggt tct aca atc tct ctg atg aga acc acc agg gt tct aca atc tct ctg atg aga acc acc acc agg gt tct aca atc tct ctg atg acc acc acc acc acc acc acc acc acc ac	gta agc ttc att gag aaa agc tat aag tcc atc ttt gtt ttg Val Ser Phe Ile Glu Lys Ser Tyr Lys Ser Ile Phe Val Leu 35 aac ttt gtc cag aat gag tgg tgc cat tat gaa ttc tac ttt Asn Phe Val Gln Asn Glu Trp Cys His Tyr Glu Phe Tyr Phe 50 cac aat ctc ttc cat gaa aat tct gat cay ata att ctt atc His Asn Leu Phe His Glu Asn Ser Asp Xaa Ile Ile Leu Ile 70 gaa ccc att cca ttc tat tgc att cac acc agg tat cat aaa Glu Pro Ile Pro Phe Tyr Cys Ile Pro Thr Arg Tyr His Lys 85 gct ctc ctg gaa aaa aaa gca tac ttg gaa tgg ccc aag gat Ala Leu Leu Glu Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp 100 aaa tgt ggg ctt ttc ttg ggca aac ctt cga gct gct gtt aat Lys Cys Gly Leu Phe Trp Ala Asn Leu Arg Ala Ala Val Asn 115 gta tta gcc acc aga gaa atg tat gaa ctg cag aca ttc aca Val Leu Ala Thr Arg Glu Met Tyr Glu Leu Gln Thr Phe Thr 130 aaat gaa gag tct cga ggt tct aca atc tct ctg atg aga aca Asn Glu Glu Ser Arg Gly Ser Thr Ile Ser Leu Met Arg Thr 155 ccta taaaatcca cagtccttgg gaagttgggg accacataca ctgttgg acattgat acaatctta tgatggcaat ttgacaatat ttattaaaat aaaa acattgat acaatctta tgatggcaat ttgacaatat ttattaaaat aaaa	Ctt tat gaa age tac tit gay as age tac tit gay taken age to gas all and gay to the ser Tyr Phe Asp Pro Gly Lys Ser Ile Ser Glu Asn 25 gta age tte att gag aaa age tat aag toe ate tit git tey toy as age tit gar age tee age to age the tac tit gee the ser Phe Ile Glu Lys Ser Tyr Lys Ser Ile Phe Val Leu Xaa 45 aac tit git cag aat gag tig tig cat tat gaa tit tac tit gee Asn Phe Val Gln Asn Glu Trp Cys His Tyr Glu Phe Tyr Phe Ala 50 cac aat cit tit cat gaa aat toe gat cay ata att cit ate tit gee Asn Leu Phe His Glu Asn Ser Asp Xaa Ile Ile Leu Ile Leu 70 gaa ccc att cca tit tat tig att ccc acc agg tat cat aaa cit glu Pro Ile Pro Phe Tyr Cys Ile Pro Thr Arg Tyr His Lys Leu 90 get cit ctg gaa aaa aaa gea tat tig gaa tig ccc aag gat agg Ala Leu Leu Glu Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg 110 aaaa tig gigg cit tie tig gid aac cit cit ga get get git aat git Lys Cys Gly Leu Phe Trp Ala Asn Leu Arg Ala Ala Val Asn Val 115 gta tia gee acc aga gaa atg tat gaa cit cag aca tit aad git to aat gas at gag tat gad aat gad tit aat git aat gaa cit cag aga aca tit aad giv leu Asn Glu Met Tyr Glu Leu Gln Thr Phe Thr Glu 135 gta tia gaa gag tit cit aca at tit gaa cit cag aga aca tit aat git aat gaa cit cag aga aca tit aat git aat gaa gag tit cit aca at tit cit cit aat git aat gaa cit cit aat gag aca aca tit cat aat git aat gaa cit cit aat git leu Met Tyr Glu Leu Gln Thr Phe Thr Glu 135 aaat gaa gag tit cit aca at tit cit cit gar aga aca gac tit cat aat gat tit aat gaa cit cit aat gag aca gac tit cat aat gat tit cit aat gaa cit cit cit aat gag aca gac tit cat aat gat tit cit aat gat gad aat gad aat gat tit cit aat gat gat cit cat aat gat tit cit cit aat gat gad aat gad aat gat cit cat aat gat tit cit aat gat gad aat gad aat gad aat gat cit cit aat gat gat cit cat aat gat gad aat

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His His Asn Leu Phe His Glu Asn Ser Asp Xaa Ile Ile Leu Ile Leu
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Leu Glu Pro Ile Pro Phe Tyr Cys Ile Pro Thr Arg Tyr His Lys Leu
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Glu Ala Leu Leu Glu Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg
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                                 105
Arg Lys Cys Gly Leu Phe Trp Ala Asn Leu Arg Ala Ala Val Asn Val
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Agn Val Leu Ala Thr Arg Glu Met Tyr Glu Leu Gln Thr Phe Thr Glu
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 gaa cat gat tet gee tgg gtg aaa agt gaa ttg gta eet tae eta gaa
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 Glu His Āsp Ser Āla Trp Val Lys Ser Glu Leu Val Pro Tyr Leu Glu
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 aaa gaa gat ata cag att tgt ctt cat gag aga aac ttt gtc cct ggc
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tcc Ser 65	atc Ile	ttt Phe	gtt Val	ttg Leu	tct Ser 70	ccc Pro	aac Asn	ttt Phe	gtc Val	cag Gln 75	agt Ser	gag Glu	tgg Trp	tgc Cys	cat His 80	240
tac Tyr	gaa Glu	ctc Leu	tat Tyr	ttt Phe 85	gcc Ala	cat His	cac His	aat Asn	ctc Leu 90	ttt Phe	cat His	gaa Glu	gga Gly	tct Ser 95	aat Asn	288
aac Asn	tta Leu	atc Ile	ctc Leu 100	atc Ile	tta Leu	ctg Leu	gaa Glu	ccc Pro 105	att Ile	cca Pro	cag Gln	aac Asn	agc Ser 110	att Ile	ccc Pro	336
A s n √	aag Lys	tac Tyr 115	cac His	aag Lys	ctg Leu	aag Lys	gct Ala 120	ctc Leu	atg Met	acg Thr	cag Gln	cgg Arg 125	act Thr	tat Tyr	ttg Leu	384
Gln C	tgg Trp 130	ccc Pro	aag Lys	gag Glu	aaa Lys	agc Ser 135	aaa Lys	cgt Arg	Gly aaa	ctc Leu	ttt Phe 140	tgg Trp	gct Ala	a		427
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_ T				J												
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Lys	Glu	Asp 35		Gln	Ile	Cys	Leu 40	His	Glu	. Arg	Asn	Phe 45	Val	Pro	Gly	
Lys	Ser 50		Val	Glu	Asn	Ile 55	Ile	Asn	Cys	Ile	Glu 60	Lys	Ser	Tyr	Lys	
Ser 65		Phe	Val	Leu	Ser 70		Asn	Phe	· Val	Glr 75	ser	Glu	Trp	Cys	His 80	
Tyr	Glu	Leu	Tyr	Phe 85		His	His	Asn	Let 90	ı Phe	e His	Glu	Gly	y Ser 95	Asn	
Δgn	Lei	Tle	ı Ten	ıTle	Leu	. Lev	ı Glu	ı Pro	o Ile	e Pro	o Glr	ı Asr	. Sei	c Ile	Pro	

105 110

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100 105 110

			100													
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gac Asp	ggc Gly 130	caa Gln	gcc Ala	tcc Ser	cga Arg	cta Leu 135	cnn Xaa	gat Asp	gcg Ala	ctg Leu	acc Thr 140	agc Ser	gcc Ala	tct Ser	gcc Ala	432
gcc Ala 145	aga Arg	gtg Val	tcc Ser	tcc Ser	tct Ser 150	ggc Gly	ccc Pro	acc Thr	agc Ser	cca Pro 155	gtg Val	gtc Val	gcg Ala	cag Gln	ctt Leu 160	480
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Asn	cgg Arg	aac Asn	ttc Phe 180	tgc Cys	cag Gln	gga Gly	acc Thr	cac His 185	Gry	cga Arg	ata Ile	gcc Ala	gtg Val 190		cgg Arg	576
aat Asn	cct Pro	gca Ala	Arg	tgc Cys	cac His	ctc Leu	cac His 200	7111	cac His	cta Leu	aca Thr	tat Tyr 205		tgo Cys	c ctg Leu	624
I∄ ←	.0> 2 .1> 2 .2> I	24 209		atgo	tege	ca c	ccto	acca	ic ac	acc						662
	00> 2 a Se: l	24 r Thi	c Cys	Ala	a Trp 5	p Pro	Gly	y Phe	e Pro	o Gly	/ Gly	y Gly	y Gl	y Ly 1	s Val 5	
Gl	y Xa	a Me	t Arg		t Pro	o Cys	s Pr	o Th	r Me	t Pro	Se:	r Trj	se 3	r Se O	r Thr	
	~ 7\~	q Xa	a Ala	a Gl:	n Tr	p Gl	n Th	r Gl	у Су	s Th	r Th	r Se	r Ph 5	e Gl	y Gly	
Ly	S AL	3						·								
Se	r Tr 5	3 p Ar 0	5 g Se	r Al	a Va		y Al 5	a Gl			J	•			p Arg	•
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Ala Arg Val Ser Ser Ser Gly Pro Thr Ser Pro Val Val Ala Gln Leu
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145
Leu Arg Pro Ala Cys Met Ala Leu Thr Arg Asp Asn His His Phe Tyr
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Ġly	Ser	tat Tyr	agc Ser	ttc Phe 50	ttc Phe	agt Ser	ttc Phe	cca Pro	gaa Glu 55	ctg Leu	cag Gln	gtg Val	ctg Leu	gat Asp 60	tta Leu	355		
Se £ U	agg Arg	tgt Cys	gaa Glu 65	ıIIe	cag Gln	aca Thr	att Ile	gaa Glu 70	gat Asp	Gly aaa	gca Ala	tat Tyr	cag Gln 75		cta Leu	403		
ago Ser L	cac His	ctc Leu 80	ı Ser	acc Thr	tta Leu	ata Ile	ttg Leu 85	aca Thr	gga Gly	aac Asn	ccc Pro	ato Ile 90		g agt Ser	tta Leu	451		
PPP SIA	Leu	ı Gly	ı gcc 7 Ala	: ttt a Phe	tct Ser	gga Gly 100	ьeu	tca Ser	agt Ser	tta Leu	cag Gln 105	aaq Ly:	g cto s Lev	g gtg ı Val	gct Ala	· 499		
200	g gag L Glu	j aca ı Thi	a aat c Ası	: cta n Lei	a gca ı Ala 115	a ser	cta Leu	gag Glu	aac Asn	tto Phe 120		atto Ile	t gga e Gly	a cat y His	ctc Leu 125	547		
- aaa Lys	a act s Thi	tt: Lei	g aaa u Ly:	a gaa s Gli 130	и Ьег	aat 1 Asi	gtg Val	gct Ala	cac His	, ADI	ctt Lei	at u Il	c caa e Gli	a tct n Sei 140	ttc Phe	595		
aa Ly	a tta s Le	a cc u Pr	t ga o Gl	u Ty:	t ttt r Ph	t tc e Se:	t aat r Asr	cto Lev 15	7 1111	c aat r Asi	t cta n Le	a ga u Gl	g ca u Hi 15		g gac 1 Asp			
ct Le	t tc u Se	c ag r Se 16	r As	c aa n Ly	g at	t ca e Gl	a agt n Se: 16!	C TT	t tai e Ty:	t tg r Cy	c ac s Th	a ga r As 17	, p = 0	g cg	g gtt g Val			
ct Le	a ca u Hi 17	s Gl	a at n Me	g cc t Pr	c ct o Le	a ct u Le 18	u As	t ct n Le	c tc u Se	t tt r Le	a ga u As 18	ים קי	g to eu Se	c ct er Le	g aay u Xaa	739 a		

cct Pro	Me	g a	lac Asn	ttt Phe	atc Ile	caa Gln 195	cca Pro	ggt Gly	gca Ala	ttt Phe	aa Ly 20		jaa Slu	att Ile	agg Arg	ctt Leu	cat His 205	787
		g a	act Thr	tta Leu	aga Arg 210	aat Asn	aat Asn	ttt Phe	gat Asp	agt Ser 215		a a u P	aat Asn	gta Val	atg Met	aaa Lys 220	act Thr	835
tg! Cy:	at s II	t (le (caa Gln	ggt Gly 225	ctg Leu	gct Ala	ggt Gly	tta Leu	gaa Glu 230		c ca Hi	t o .s <i>l</i>	egt Arg	ttg Leu	gtt Val 235	ctg Leu	gga Gly	883
ga Gl	a ti u Pl	he	aga Arg 240	aat Asn	gaa Glu	gga Gly	aac Asn	ttg Leu 245		aag Lys	g tt s Ph	t que	gac Asp	aaa Lys 250	tct Ser	gct Ala	cta Leu	931
ga Gl	u G	gc ly 55	ctg Leu	tgc Cys	aat Asn	ttg Leu	acc Thr 260	110	gaa Glu	ga: Gl:	a tt u Pł		cga Arg 265	tta Leu	gca Ala	tac Tyr	tta Leu	979
As	c t p T	ac 'yr	tac Tyr	ctc Leu	gat Asp	gat Asp 275	TTE	att lle	gac Asp	tt Le		tt he 80	aat Asn	tgt Cys	ttg Lev	aca Thr	aat Asn 285	1027
	t t	ct	tca Ser	ttt Phe	tcc Ser 290	. тег	gtg Val	g agt L Sei	gto Val	ac l Th 29	-	tt le	gaa Glu	agg Arg	g gta g Val	a aaa Lys 300	gac Asp	1075
ti Pl	手 姓 te s	ct Ser	tat Tyr	aat Ası 309	n Pne	e gga	a tgg 7 Trj	g ca o Gl:	a cat n Hit 31		a g eu G	aa lu	tta Leu	gtt Val	aad L Asi 31!	c tgt n Cy: 5	aaa Lys	1123
t P	E E C	gga Gly	cag Gli 320	n Ph	t cc e Pr	c aca	a tte	g aa u Ly 32	2 nc	c aa u Ly	aa t /s S	ct er	cto	2 aaa 1 Ly: 33		g cti g Le	t act u Thr	1171
	⊨ tc he '	act Thr 335	Se	c aa r As	c aa n Ly	a gg s Gl	t gg y Gl 34	A YO	t gc n Al	t ti a Pl	tt t he S	ca Ser	gaa Glu 349		t ga l As	t ct p Le	a cca u Pro	1219
S	gc er 50	ctt Lev	ga Gl	g tt u Ph	t ct le Le	a ga u As 35	ь ге	c ag u Se	jt ag er Ar	ja a :g A	S11 \	ggc 31y 360		g ag u Se	t tt r Ph	c aa le Ly	a ggt s Gly 365	1267
		tgt Cys	t to Se	t ca r Gl	ia ag n Se 37	er As	t tt p Ph	t gg ne G	gg ac Ly Th	TT T	cc hr 75	agc Ser	ct. Le	a aa u Ly	g ta 's Ty	ıt tt ⁄r L∈ 38	a gat u Asp 10	1315
[ctg Leu	ago Se:	c tt	ie As	at gg sn Gl	gt gt Ly Va	t at al I	tt ad le Ti	111 1.1	tg a et S 90	gt Ser	tca Ser	a aa c As	c tt n Pl	c tt ne Le 39	:g gg eu G] 95	gc tta Ly Leu	1363
(gaa Glu	ca Gl:	a ct n Le	ca ga eu G	aa ca lu H	at c is L	ig g eu A	at t sp P	tc c he G	ag o ln H	at His	tco Se:	c aa r As	at ti sn Le	eu L	aa ca ys G	aa atg ln Met	1411

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400 405 410

gag Glu	ttt	tca	ata						220	ata	att	tac	ctt	cac	1459
		Ser	Val	Phe	Leu 420	tca Ser	ctc Leu	Arg	Asn	Leu 425	Ile	Tyr	Leu	Asp	1437
tct Ser	cat His	act Thr	cac His	acc Thr 435	aga Arg	gtt Val	gct Ala	ttc Phe	aat Asn 440	ggc Gly	atc Ile	ttc Phe	aat Asn	ggc Gly 445	1507
tcc Ser	agt Ser	ctc Leu	gaa Glu 450	gtc Val	ttg Leu	aaa Lys	atg Met	gct Ala 455	ggċ Gly	aat Asn	tct Ser	ttc Phe	cag Gln 460	gaa Glu	1555
ttc Phe	ctt Leu	cca Pro 465	gat Asp	atc Ile	ttc Phe	aca Thr	gag Glu 470	ctg Leu	aga Arg	aac Asn	ttg Leu	acc Thr 475	ttc Phe	ctg Leu	1603
ctc Leu	Ser	cag Gln	tgt Cys	caa Gln	ctg Leu	gag Glu 485	cag Gln	ttg Leu	tct Ser	cca Pro	aca Thr 490	gca Ala	ttt Phe	aac Asn	1651
Leu	Ser	agt Ser	ctt Leu	cag Gln	gta Val 500	cta Leu	aat Asn	atg Met	agc Ser	urs	ASII	aac Asn	ttc Phe	ttt Phe	1699
Leu	gat Asp	acg Thr	ttt Phe	cct Pro 515	tat Tyr	aag Lys	tgt Cys	ctg Leu	ASI	Ser	ctc Leu	cag Gln	gtt Val	ctt Leu 525	1747
	agt Ser	cto Leu	Asn	His	ata Ile	atg Met	act Thr	Sei	гуу	aaa Lys	cag Gln	gaa Glu	neu	OLII	1795
ttt Phe	cca Pro	Ser	Ser	cta Leu	gct Ala	ttc Phe	ь тег	L ASI	ctt Leu	act Thr	cag Gln	. Apri	gac Asp	ttt Phe	1843
tgt Cys	: Thi	Cys	gaa Glu	cac His	cag Glr	ı ser	Pne	ctg Lei	g caa u Glr	tgg Trp) TIE	. Lys	gac Asp	cag Gln	1891
g Glr	ı Lev	tto Lei	g gtg ı Val	g gaa L Glu	ı Val	L GII	a cga	a ato g Met	g gaa : Glu	ı Cys	o HTC	aca Thr	cct Pro	tca Ser	1939
aag D Lys	g cag s Gl:	g ggo n Gl	c ato	t Pro	o va.	g cto Lei	g agt 1 Se:	t ttg r Lei	I MO	11 11	c acc	tgt Cys	caç Gli	g atg n Met 605	1987
t aag n Lys	g ac s Th	c ater Ile	e Il	e Gl	t gte	g tog 1 Se:	g gt r Va	т пе	u se	t gte r Va	g cti l Lei	gta ı Val	L va.	1 001	2035
	tct Ser tcer tcer tcer tcer tcer tcer tcer tc	tct cat Ser His tcc agt Ser Ser ttc ctt Phe Leu ctc tct Leu Ser 480 ctc tcc Leu Ser ttg gat Leu Asp tac agt Tyr Ser ttt cca Phe Pro tgt act Cys Thr 560 cag ctc Gln Leu 575 aag cag Lys Gln	tct cat act Ser His Thr tcc agt ctc Ser Ser Leu ttc ctt cca Phe Leu Pro 465 ctc tct cag Leu Ser Gln 480 ctc tcc agt Leu Ser Ser ttg gat acg Leu Asp Thr tac agt ctc Tyr Ser Leu ttt cca agt Phe Pro Ser 545 tgt act tgt Cys Thr Cys 560 cag ctc ttg Gln Leu Leu 575 aag cag ggc Lys Gln Gly	tct cat act cac Ser His Thr His tcc agt ctc gaa Ser Ser Leu Glu 450 ttc ctt cca gat Phe Leu Pro Asp 465 ctc tct cag tgt Leu Ser Gln Cys 480 ctc tcc agt ctt Leu Ser Ser Leu 495 ttg gat acg ttt Leu Asp Thr Phe tac agt ctc aat Tyr Ser Leu Asn 530 ttt cca agt agt Phe Pro Ser Ser 545 tgt act tgt gaa Cys Thr Cys Glu 575 cag cag ctc ttg gta Cys Gln Leu Leu Val 575 aag cag ggc atc Lys Gln Gly Mei aag acc atc atc at Lys Thr Ile Ile	tct cat act cac acc Ser His Thr His Thr 435 tcc agt ctc gaa gtc Ser Ser Leu Glu Val 450 ttc ctt cca gat atc Phe Leu Pro Asp Ile 465 ctc tct cag tgt caa Leu Ser Gln Cys Gln 480 ctc tcc agt ctt cag Leu Ser Ser Leu Gln 495 ttg gat acg ttt cct Leu Asp Thr Phe Pro 515 tac agt ctc aat cac Tyr Ser Leu Asn His 530 ttt cca agt agt cta Phe Pro Ser Ser Leu 545 tgt act tgt gaa cac cta Cys Thr Cys Glu His 560 cag ctc ttg gtg gaa cac Gln Leu Leu Val Glu 575 aag cag ggc atg cct 1959 aag cag cag ggc atg cct 1959 aag cag cag ggc atg cct 1959	tct cat act cac acc aga Ser His Thr His Thr Arg 435 tcc agt ctc gaa gtc ttg Ser Ser Leu Glu Val Leu 450 ttc ctt cca gat atc ttc Phe Leu Pro Asp Ile Phe 465 ctc tct cag tgt caa ctg Leu Ser Gln Cys Gln Leu 480 ctc tcc agt ctt cag gta Leu Ser Ser Leu Gln Val 495 ttg gat acg ttt cct tat Leu Asp Thr Phe Pro Tyr 515 tac agt ctc aat cac ata Tyr Ser Leu Asn His Ile 530 ttt cca agt agt cta gct Phe Pro Ser Ser Leu Ala 545 tgt act tgt gaa cac cag Cys Thr Cys Glu His Glr 560 cag ctc ttg gtg gaa gtt Cag Cys Thr Cys Glu His Glr 560 cag cag ctc ttg gtg gaa gtt Cys	tct cat act cac acc aga gtt Ser His Thr His Thr Arg Val tcc agt ctc gaa gtc ttg aaa Ser Ser Leu Glu Val Leu Lys 450 ttc ctt cca gat atc ttc aca Phe Leu Pro Asp Ile Phe Thr 465 ctc tct cag tgt caa ctg gag Leu Ser Gln Cys Gln Leu Glu 480 ctc tcc agt ctt cag gta cta Leu Ser Ser Leu Gln Val Leu 495 ttg gat acg ttt cct tat aag Leu Asp Thr Phe Pro Tyr Lys 515 tac agt ctc aat cac ata atg Tyr Ser Leu Asn His Ile Met 530 ttt cca agt agt cta gct ttc Phe Pro Ser Ser Leu Ala Phe 545 tgt act tgt gaa cac cag agt Cys Thr Cys Glu His Gln Ser 560 cag ctc ttg gtg gaa gtt gaa Gln Leu Leu Val Glu Val Glu 575 aag cag ggc atg cct gtg ctc Lys Gln Gly Met Pro Val Leu 595 t aag acc atc att aggt gtg tcc aag agt gtg tcc Lys Thr Ile Ile Gly Val Sei	tct cat act cac acc aga gtt gct Ser His Thr His Thr Arg Val Ala tcc agt ctc gaa gtc ttg aaa atg Ser Ser Leu Glu Val Leu Lys Met 450 ttc ctt cca gat atc ttc aca gag Phe Leu Pro Asp Ile Phe Thr Glu 465 ctc tct cag tgt caa ctg gag cag Leu Ser Gln Cys Gln Leu Glu Gln 480 ctc tcc agt ctt cag gta cta act Leu Ser Ser Leu Gln Val Leu Asn 495 ttg gat acg ttt cct tat aag tgt Leu Asp Thr Phe Pro Tyr Lys Cys tac agt ctc aat cac ata atg act Tyr Ser Leu Asn His Ile Met Thr 530 ttt cca agt agt cta gct ttc tat Phe Pro Ser Ser Leu Ala Phe Leu 545 tgt act tgt gaa cac cag agt ttc Cys Thr Cys Glu His Gln Ser Phe 560 cag ctc ttg gtg gaa gtt gaa cg Gln Leu Val Glu Val Glu Arg 575 aag acc atc att ggt gtg tcg gtg tag tcg tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag tcg gta tag acc atc att ggt gtg tcg gtg tag tcg gtg tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg tag acc tag acc atc att ggt gtg tcg gtg	tct cat act cac acc aga gtt gct ttc Ser His Thr His Thr Arg Val Ala Phe 435 tcc agt ctc gaa gtc ttg aaa atg gct Ser Ser Leu Glu Val Leu Lys Met Ala 450 ttc ctt cca gat atc ttc aca gag ctg Phe Leu Pro Asp Ile Phe Thr Glu Leu 465 ctc tct cag tgt caa ctg gag cag ttg Leu Ser Gln Cys Gln Leu Glu Glu Gln Leu 480 ctc tcc agt ctt cag gta cta aat atg Leu Ser Ser Leu Gln Val Leu Asn Met 495 ttg gat acg ttt cct tat aag tgt ctg Leu Asp Thr Phe Pro Tyr Lys Cys Leu 515 tac agt ctc aat cac ata atg act tcc Tyr Ser Leu Asn His Ile Met Thr Ser 530 ttt cca agt agt cta gct ttc tta aat Phe Pro Ser Ser Leu Ala Phe Leu Asn 545 tgt act tgt gaa cac cag agt ttc ctg Gln Leu Val Glu Yal Glu Arg 565 cag ctc ttg gtg gaa gtt gaa cga atg Gln Leu Leu Val Glu Val Glu Arg 575 aag cag ggc atg cct gtg ctg agt ttg taag acc atc att ggt gtg tcg gtc ctc taag ctc ttg 595 aag acc atc att ggt gtg tcg gtc ctc taag acc atc att ggt gtg tcg gtc ctc taag ttg ttc taag tgt ctc ttg taag acc atc att ggt gtg tcg gtc ctc ttg taag acc atc att ggt gtg tcg gtc ctc taag ttg taag tgt ctc ttg tag at ctc ttg tag at ctc agt gtg tcg gtc ctc ttg tag at ttg tag at ctc ttg tag atc ttg tag atc ttg tag atc ttg tag atc ttc ttg tag atc ttg tag atc ttc tag tag ttg tag tag ttc ttc tag ttc ttc aaa atc atc atc ttc aaa atg ttc ttc aaa ttc ttc aaa ttc ttc aaa ttg ttc ttc aaa ttg ttc ttc aaa ttg ttc ttc aaa ttg ttc tta aaa ttg tta tta aaa tta ttc tta	tct cat act cac acc aga gtt gct ttc aat Affa cac aga gtt gct ggc ggc ser Ser Leu Glu Val Leu Lys Met Ala Gly 450 tcc agt ctc gaa gtc ttg aaa atg gct ggc ggc ser Ser Leu Glu Val Leu Lys Met Ala Gly 455 ttc ctt cca gat atc ttc aca gag ctg aga phe Leu Pro Asp Ile Phe Thr Glu Leu Arg 470 ctc tct cag tgt caa ctg gag cag ttg tct Leu Ser Gln Cys Gln Leu Glu Gln Leu Ser A85 ctc tcc agt ctt cag gta cta aat atg agc ctg aga cag ttg tct leu Ser Ser Leu Gln Val Leu Asn Met Ser 500 ttg gat acg ttt cct tat aag tgt ctg aca acc aga ttg tct Leu Asp Thr Phe Pro Son Son Son Son Son Son Son Son Son So	tet cat act cac acc aga gtt get tec aat ggc ser His Thr His Thr Arg Val Ala Phe Asn Gly 440 tec agt ctc gaa gtc ttg aaa atg get ggc aat Ser Ser Leu Glu Val Leu Lys Met Ala Gly Asn 455 ttc ctt cca gat atc ttc aca gag ctg aga aac Phe Leu Pro Asp Ile Phe Thr Glu Leu Arg Asn 470 ctc tct cag tgt caa ctg gag cag ttg tet cca Leu Ser Gln Cys Gln Leu Glu Glu Leu Arg Asn 480 ctc tcc agt ctt cag gta cta aat atg agc cac Leu Ser Leu Gln Val Leu Asn Met Ser His 500 ttg gat acg ttt cct tat aag tgt ctg aac tcc Tyr Lys Cys Leu Asn Ser Ser Leu Asn His Ile Met Thr Ser Lys Lys 535 ttt cca agt acg cta gct acc at agt ttc ca aaa aaa atg ctg ctg acc tcg Phe Pro Ser Ser Leu Ala Phe Leu Asn Leu Thr 550 ttg act tgt gaa cac cag agt ttc ctg aac ctc Tyr Ser Leu Asn His Gln Ser Phe Leu Asn Leu Thr 550 tgt act tgt gaa cac cag agt ttc ctg caa tgg cys Cys Thr Cys Glu His Gln Ser Phe Leu Gln Trg 565 tga act ttg gaa cac cag agt ttc ctg caa tgg cha ctg acc ttg glu Arg Met Glu Cys 575 aag cag cag ggc atg cct gtg ctg agt ttg aat acc acc acc acc acc acc acc acc acc	tet cat act cac acc aga gtt get tet aat ggc atc Ser His Thr His Thr Arg Val Ala Phe Ash Gly Ile 435 tec agt ctc gaa gtc ttg aaa atg get ggc aat tet cot cac agt atc His Arg Val Ala Phe Ash Gly Ile 440 tec agt ctc gaa gtc ttg aaa atg get ggc aat tet afs acc aca acc Afs Afs Ile Phe Thr Glu Leu Arg Ash Leu Arg	tcc agt ctc gaa gtc ttg aaa atg gct ggc aat tct ttc ctt cat act cac gat atc ttc are find for	tct cat act cac acc aga gtt gct ttc aat ggc atc ttc aat ser His Thr His Thr Arg Val Ala Phe Asn Gly Ile Phe Asn 435 tcc agt ctc gaa gtc ttg aaa atg gct ggc aat tct tc cag ser Ser Leu Glu Val Leu Lys Met Ala Gly Asn Ser Phe Gln 450 ttc ctt cca gat atc ttc aca gag ctg aga aac ttg Arg Val Ala Phe Asn Gly Ile Phe Asn 440 tcc ctt cca gat atc ttc aca gag ctg aga aac ttg acc ttc Phe Leu Pro Asp Ile Phe Thr Glu Leu Arg Asn Leu Thr Phe 470 ctc tct cag tgt caa ctg gag cag ttg tct cca aca gca ttt Leu Ser Gln Cys Gln Leu Glu Gln Leu Ser Pro Thr Ala Phe 480 ctc tcc agt ctt cag gta cta aat atg agc cac aca aca cac ttc Leu Ser Ser Leu Gln Val Leu Asn Met Ser His Asn Asn Phe 505 ttg gat acg ttt cct tat aag tgt ctg aca tcc ctc cag gtt Leu Asp Thr Phe Pro Tyr Lys Cys Leu Asn Ser Leu Gln Val Leu Asn His Ile Met Thr Ser Leu Asn His Ile Met Thr Ser Lys Gln Glu Leu Ser Ser Leu Ala Phe Leu Asn Leu Thr Gln Asn Asn Ser Cys Thr Cys Glu His Gln Ser Phe Leu Gln Trp Ile Lys Asn Ser Leu Gln Val Ser Phe Leu Gln Trp Ile Lys Asn Ser Leu Asn Thr Pro 565 acag ctc ttg gaa cac cac ag agt ttc ctg agt ttg at act acc ctg acc acc acc acc acc acc acc acc acc ac	tct cat act cac acc acc aga gtt gct ttc aat ggc atc ttc aat ggc Ser His Thr His Thr Arg Val Ala Phe Asn Gly Ile Phe Asn Gly 445 tcc agt ctc gaa gtc ttg aaa atg gct ggc act ctc cag gaa Ser Ser Leu Glu Val Leu Lys Met Ala Gly Asn Ser Phe Gln Glu Glu 455 ttc ctt cca gat atc ttc aca gag ctg aga aac ttg acc ttc ctg aca ctg gag ctg aga acc ttg acc ttc ctg aca ctg Gln Cys Gln Leu Glu Gln Leu Ser Pro Thr Ala Phe Asn Asn Leu Thr Phe Leu Ser Gln Cys Gln Leu Gln Leu Asn Met Ser Pro Thr Ala Phe Asn Asn Asn Phe Phe Leu Ser Ser Leu Gln Val Leu Asn Met Ser His Asn Asn Phe Phe Leu Asn Thr Phe Pro Tyr Lys Cys Leu Asn Ser Leu Gln Val Leu Ser Thr Ser Leu Gln Val Leu Asn Ser Leu Gln Cya Gln Eu Ser Ser Leu Gln Val Leu Asn Ser Leu Gln Cya Gln Ser Pro Thr Ala Phe Asn Asn Asn Phe Phe Pro Tyr Lys Cys Leu Asn Ser Leu Gln Val Leu Ser Ser Leu Gln Val Leu Asn Ser Leu Gln Cya Gln Ser Leu Asn His Ile Met Thr Ser Lys Lys Gln Glu Leu Gln Sab Cys Sob Ser Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Sob Ser Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Sob Ser Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Sob Ser Leu Gln Sab Cys Gln Glu Leu Gln Sab Cys Sob Ser Leu Ala Phe Leu Gln Trp Ile Lys Asp Phe Sob Sob Sob Cys Sob

gtt Val	gta Val	gca Ala	gtt Val 625	ctg Leu	gtc Val	tat Tyr	aag Lys	ttc Phe 630	tat Tyr	ttt Phe	cac His	ctg Leu	atg Met 635	ctt Leu	ctt Leu	2083
gct Ala	ggc Gly	tgc Cys 640	ata Ile	aag Lys	tat Tyr	ggt Gly	aga Arg 645	ggt Gly	gaa Glu	aac Asn	atc Ile	tat Tyr 650	gat Asp	gcc Ala	ttt Phe	2131
gtt Val	atc Ile 655	tac Tyr	tca Ser	agc Ser	cag Gln	gat Asp 660	gag Glu	gac Asp	tgg Trp	gta Val	agg Arg 665	aat Asn	gag Glu	cta Leu	gta Val	2179
aag Lys 670	aat Asn	tta Leu	gaa Glu	gaa Glu	999 Gly 675	gtg Val	cct Pro	cca Pro	ttt Phe	cag Gln 680	ctc Leu	tgc Cys	ctt Leu	cac His	tac Tyr 685	2227
aga Arg	gac Asp	ttt Phe	att Ile	ccc Pro 690	ggt Gly	gtg Val	gcc Ala	att Ile	gct Ala 695	gcc Ala	aac Asn	atc Ile	atc Ile	cat His 700	gaa Glu	2275
ggi ggi	ttc Phe	cat His	aaa Lys 705	agc Ser	cga Arg	aag Lys	gtg Val	att Ile 710	gtt Val	gtg Val	gtg Val	tcc Ser	cag Gln 715	cac His	ttc Phe	2323
atc Ile	cag Gln	agc Ser 720	Arg	tgg Trp	tgt Cys	atc Ile	ttt Phe 725	gaa Glu	tat Tyr	gag Glu	att Ile	gct Ala 730	cag Gln	acc Thr	tgg Trp	2371
G I r ₫	Phe	Leu	agc Ser	agt Ser	cgt Arg	gct Ala 740	GTĀ	atc Ile	atc Ile	ttc Phe	att Ile 745	val	ctg Leu	cag Gln	aag Lys	2419
j g £ g Val 750	Glu	aag Lys	acc Thr	ctg Leu	ctc Leu 755	Arg	cag Gln	cag Gln	gtg Val	gag Glu 760	пес	tac Tyr	cgc Arg	ctt Leu	ctc Leu 765	2467
ago Sei	agg Arg	g aac g Asn	act Thr	tac Tyr 770	: Lev	gag Glu	tgg Trp	gag Glu	gac Asp 775) Ser	gto Val	ctg Lev	Gly 999	cgg Arg 780	cac His	2515
ato Ile	tto Phe	tgg Trp	aga Arg 785	g Arc	cto Lev	aga Arg	aaa g Lys	gco Ala 790	r nec	g cto Lei	g gat 1 Asp	ggt Gly	aaa Lys 795	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	tgg Trp	2563
aa As	t cca n Pro	a gaa o Glu 800	ı Gly	a aca 7 Thi	a gtg Val	g ggt Gly	aca 7 Thi 805	C GI	a tgo y Cys	aat Asr	tgg Trj	g cag o Glr 810	1 010	a gca ı Ala	a aca a Thr	2611
tc Se	t ater Ile 81		aagag	ggaa	aaat	caaa	aac (ctcc	tgagg	gc at	ttc	ttgc	c cag	gctg	ggtc	2667

caacacttgt tcagttaata agtattaaat gctgccacat gtcaggcctt atgctaaggg 2727

tgagtaatte catggtgeae tagatatgea gggetgetaa teteaaggag etteeagtge 2787 agagggaata aatgctagac taaaatacag agtcttccag gtgggcattt caaccaactc 2847 agtcaaggaa cccatgacaa agaaagtcat ttcaactctt acctcatcaa gttgaataaa 2907 gacagagaaa acagaaagag acattgttct tttcctgagt cttttgaatg gaaattgtat 2967 tatgttatag ccatcataaa accattttgg tagttttgac tgaactgggt gttcactttt 3027 teetttttga ttgaatacaa tttaaattet aettgatgae tgeagtegte aaggggetee 3087 tgatgcaaga tgccccttcc attttaagtc tgtctcctta cagakgttaa agtctantgg 3147 ctaatteeta aggaaacetg attaacacat geteacaace ateetggtea tteteganea 3207 tgttctattt tttaactaat cacccctgat atatttttat ttttatatat ccagttttca 3267 tttttttacg tcttgcctat aagctaatat cataaataag gttgtttaag acgtgcttca 3327 adtatecata ttaaccaeta ttttteaagg aagtatggaa aagtaeaete tgteaetttg 3387 tractcgatg tcattccaaa gttattgcct actaagtaat gactgtcatg aaagcagcat 3447 tgaaataatt tgtttaaagg gggcactctt ttaaacggga agaaaatttc cgcttcctgg 3507 tpttatcatg gacaatttgg gctakaggca kgaaggaagt gggatkacct caggangtca 3567 cettttcttg attccagaaa catatgggct gataaacccg gggtgacctc atgaaatgag 3627 tigcagcaga wgtttatttt tttcagaaca agtgatgttt gatggacctm tgaatctmtt 3687 tagggagaca cagatggctg ggatccctcc cctgtaccct tctcactgmc aggagaacta 3747 cgtgtgaagg tattcaaggc agggagtata cattgctgtt tcctgttggg caatgctcct 3807 tgaccacatt ttgggaagag tggatgttat cattgagaaa acaatgtgtc tggaattaat 3867 ggggttctta taaagaaggt tcccagaaaa gaatgttcat tccagcttct tcaggaaaca 3927 ggaacattca aggaaaagga caatcaggat gtcatcaggg aaatgaaaat aaaaaccaca 3987 atgagatate accttatace aggtagatgg ctactataaa aaaatgaagt gtcatcaagg 4047 atatagagaa attggaaccc ttcttcactg ctggagggaa tggaaaatgg tgtagccgtt 4107 atgaaaaaca gtacggaggt ttctcaaaaa ttaaaaatag aactgctata tgatccagca 4167 atctcacttc tgtatatata cccaaaataa ttgaaatcag aatttcaaga aaatatttac 4227 acteceatgt teattgtgge actetteaca ateaetgttt ecaaagttat ggaaacaace 4287

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Asn Leu Pro Phe Ser Thr Lys Asn Leu Asp Leu Ser Phe Asn Pro Leu
             30
Arg His Leu Gly Ser Tyr Ser Phe Phe Ser Phe Pro Glu Leu Gln Val
Leu Asp Leu Ser Arg Cys Glu Ile Gln Thr Ile Glu Asp Gly Ala Tyr
Gln Ser Leu Ser His Leu Ser Thr Leu Ile Leu Thr Gly Asn Pro Ile
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                      80
 75
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Gln Ser Leu Ala Leu Gly Ala Phe Ser Gly Leu Ser Ser Leu Gln Lys

Leu Val Ala Val Glu Thr Asn Leu Ala Ser Leu Glu Asn Phe Pro Ile

115

95

110

100

Gly His Leu Lys Thr Leu Lys Glu Leu Asn Val Ala His Asn Leu Ile Gln Ser Phe Lys Leu Pro Glu Tyr Phe Ser Asn Leu Thr Asn Leu Glu His Leu Asp Leu Ser Ser Asn Lys Ile Gln Ser Ile Tyr Cys Thr Asp Leu Arg Val Leu His Gln Met Pro Leu Leu Asn Leu Ser Leu Asp Leu Ser Leu Xaa Pro Met Asn Phe Ile Gln Pro Gly Ala Phe Lys Glu Ile Arg Leu His Lys Leu Thr Leu Arg Asn Asn Phe Asp Ser Leu Asn Val Met Lys Thr Cys Ile Gln Gly Leu Ala Gly Leu Glu Val His Arg Leu Val Leu Gly Glu Phe Arg Asn Glu Gly Asn Leu Glu Lys Phe Asp Lys Ser Ala Leu Glu Gly Leu Cys Asn Leu Thr Ile Glu Glu Phe Arg Leu Ala Tyr Leu Asp Tyr Tyr Leu Asp Asp Ile Ile Asp Leu Phe Asn Cys Leu Thr Asn Val Ser Ser Phe Ser Leu Val Ser Val Thr Ile Glu Arg Val Lys Asp Phe Ser Tyr Asn Phe Gly Trp Gln His Leu Glu Leu Val Asn Cys Lys Phe Gly Gln Phe Pro Thr Leu Lys Leu Lys Ser Leu Lys Arg Leu Thr Phe Thr Ser Asn Lys Gly Gly Asn Ala Phe Ser Glu Val Asp Leu Pro Ser Leu Glu Phe Leu Asp Leu Ser Arg Asn Gly Leu Ser Phe Lys Gly Cys Cys Ser Gln Ser Asp Phe Gly Thr Thr Ser Leu Lys Tyr Leu Asp Leu Ser Phe Asn Gly Val Ile Thr Met Ser Ser Asn Phe Leu Gly Leu Glu Gln Leu Glu His Leu Asp Phe Gln His Ser Asn Leu

Lys Gln Met Ser Glu Phe Ser Val Phe Leu Ser Leu Arg Asn Leu Ile Tyr Leu Asp Ile Ser His Thr His Thr Arg Val Ala Phe Asn Gly Ile Phe Asn Gly Leu Ser Ser Leu Glu Val Leu Lys Met Ala Gly Asn Ser Phe Gln Glu Asn Phe Leu Pro Asp Ile Phe Thr Glu Leu Arg Asn Leu Thr Phe Leu Asp Leu Ser Gln Cys Gln Leu Glu Gln Leu Ser Pro Thr Ala Phe Asn Ser Leu Ser Ser Leu Gln Val Leu Asn Met Ser His Asn Asn Phe Phe Ser Leu Asp Thr Phe Pro Tyr Lys Cys Leu Asn Ser Leu Gla Val Leu Asp Tyr Ser Leu Asn His Ile Met Thr Ser Lys Lys Gln Glū Leu Gln His Phe Pro Ser Ser Leu Ala Phe Leu Asn Leu Thr Gln Asn Asp Phe Ala Cys Thr Cys Glu His Gln Ser Phe Leu Gln Trp Ile Lys Asp Gln Arg Gln Leu Leu Val Glu Val Glu Arg Met Glu Cys Ala Thr Pro Ser Asp Lys Gln Gly Met Pro Val Leu Ser Leu Asn Ile Thr Cys Gln Met Asn Lys Thr Ile Ile Gly Val Ser Val Leu Ser Val Leu Val Val Ser Val Val Ala Val Leu Val Tyr Lys Phe Tyr Phe His Leu Met Leu Leu Ala Gly Cys Ile Lys Tyr Gly Arg Gly Glu Asn Ile Tyr Asp Ala Phe Val Ile Tyr Ser Ser Gln Asp Glu Asp Trp Val Arg Asn Glu Leu Val Lys Asn Leu Glu Glu Gly Val Pro Pro Phe Gln Leu Cys Leu His Tyr Arg Asp Phe Ile Pro Gly Val Ala Ile Ala Ala Asn Ile

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Gln His Phe Ile Gln Ser Arg Trp Cys Ile Phe Glu Tyr Glu Ile Ala
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715
Gln Thr Trp Gln Phe Leu Ser Ser Arg Ala Gly Ile Ile Phe Ile Val
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Leu Gln Lys Val Glu Lys Thr Leu Leu Arg Gln Gln Val Glu Leu Tyr
                                 755
             750
Arg Leu Leu Ser Arg Asn Thr Tyr Leu Glu Trp Glu Asp Ser Val Leu
                             770
         765
Gly Arg His Ile Phe Trp Arg Arg Leu Arg Lys Ala Leu Leu Asp Gly
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  <221> misc feature
  <222> (62)..(100)
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    1
  gtt ctc tca cta aaa gat aac aat gtc aca gct gtc ccc acc act ttg
                                                                       96
  Val Leu Ser Leu Lys Asp Asn Asn Val Thr Ala Val Pro Thr Thr Leu
                                     25
                20
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Pro	Pro	Asn 35	Leu	ьеu	Gru	ctc Leu	40		•			45				144
Ile	Gln 50	Glu	Asn	Asp	PHE	aat Asn 55	11011				60					192
cta Leu 65		gga	aat Asn	tgc Cys	cct Pro	Mr.9	tgt Cys	nat Xaa	aat Asn	gtc Val 75	cca Pro	tat Tyr	ccg Pro	tgt Cys	aca Thr 80	240
	tgt Cys	gaa Glu	a aat 1 Asi	aat Asr 85	1 261	ccc Pro	tta Leu	cag Gln	ato Ile 90	cat His	gan Xaa	aat Asn	gct Ala	ttc Phe 95	aat Asn	288
tca Ser	tcg Sei	ac.	a gai r Xaa 10	a												300
<2] <2] <2	中 中 1	100 PRT Unkn										_	,, **		Lvc	
F	1				כ										u Lys 5	
Va	č.		2	20				_							r Leu	
Ρr	p Pr	ю А	sn Le 35	eu Le	eu Gl	.u L∈	u Ty 4	r Le	eu Ty	r As	n As	n Il 4	e Il 5	е, Ьу	s Lys	
- Il	e G	ln G	lu A	sn As	sp Pl	ne As	n As	sn Le	eu As	an Gl	lu Le	eu Gl 50	n Xa	ıa L∈	eu Asp	
		50				-	-									
6	eu Xa		ly A	sn C	ys P	ro A: 70	rg Cy				al Pi 75				rs Thr 80	
6	eu Xa	aa G	ly A	sn C	ys P	ro A: 70	rg Cy				al Pi 75				ys Thr 80 he Asn 95	
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atg ccg cca aat cta aag aat ctc tcc ttg gcc aaa aat ggg ctc aaa
                                                                    96
Met Pro Pro Asn Leu Lys Asn Leu Ser Leu Ala Lys Asn Gly Leu Lys
                                  25
              20
 tct ttc ttt tgg gac aga ctc cag tta ctg aag cat ttg gaa att ttg
                                                                    144
 Ser Phe Phe Trp Asp Arg Leu Gln Leu Leu Lys His Leu Glu Ile Leu
          35
 gacictc agc cat aac cag ctg aca aaa gta cct gag aga ttg gcc aac
                                                                    192
 Asp Leu Ser His Asn Gln Leu Thr Lys Val Pro Glu Arg Leu Ala Asn
                           55
    50
 tge tcc aaa agt ctc aca aca ctg att ctt aag cat aat caa atc agg
                                                                    240
 Cys Ser Lys Ser Leu Thr Thr Leu Ile Leu Lys His Asn Gln Ile Arg
  65.
 can ttg aca aaa tat ttt cta gaa gat gct ttg caa ttg cgc tat cta
                                                                     288
 Gla Leu Thr Lys Tyr Phe Leu Glu Asp Ala Leu Gln Leu Arg Tyr Leu
                   85
 gac atc agt tca aat aaa atc cag gtc att cag aag act agc ttc cca
                                                                     336
 Asp Ile Ser Ser Asn Lys Ile Gln Val Ile Gln Lys Thr Ser Phe Pro
              100
  gaa aat gtc ctc aac aat ctg gag atg ttg gtt tta cat cac aat cgc
                                                                     384
  Glu Asn Val Leu Asn Asn Leu Glu Met Leu Val Leu His His Asn Arg
                               120
          115
  ttt ctt tgc aac tgt gat gct gtg tgg ttt gtc tgg tgg gtt aac cat
                                                                      432
  Phe Leu Cys Asn Cys Asp Ala Val Trp Phe Val Trp Val Asn His
                           135
      130
  aca gat gtt act att cca tac ctg gcc act gat gtg act tgt gta ggt
                                                                      480
  Thr Asp Val Thr Ile Pro Tyr Leu Ala Thr Asp Val Thr Cys Val Gly
                       150
   145
   cca gga gca cac aaa ggt caa agt gtc ata tcc ctt gat ctg tat acg
                                                                      528
   Pro Gly Ala His Lys Gly Gln Ser Val Ile Ser Leu Asp Leu Tyr Thr
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	\ \ }		:
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tca gtc ctc ttt ctt Ser Val Leu Phe Leu 195	t atg gta gtt u Met Val Val 200	1100 222	cac ctc ttt ttc 624 His Leu Phe Phe 205
tgg gat atg tgg tad Trp Asp Met Trp Ty 210	c att tat tat r Ile Tyr Tyr 215	ttt tgg aaa gca Phe Trp Lys Ala 220	aag ata aag ggg 672 Lys Ile Lys Gly
tat cca gca tct gc Tyr Pro Ala Ser Al 225	230	235	240
gtg tat gac act aa Val Tyr Asp Thr Ly 24	s Ash Sel Ale	gtg aca gaa tgg Val Thr Glu Trp 250	gtt ttg cag gag 768 Val Leu Gln Glu 255
ctg gtg gca aaa tt Let Val Ala Lys Le 260	g gaa gat cca eu Glu Asp Pro	a aga gaa aaa cac o Arg Glu Lys His 265	ttc aat ttg tgt 816 Phe Asn Leu Cys 270
cta gaa gaa aga ga Lea Glu Glu Arg As 275	ac tgg cta cca sp Trp Leu Pro 28	J Gif Circ	cta gaa aac ctt 864 Leu Glu Asn Leu 285
tod cag agc ata co Ser Gln Ser Ile G 290	ag ctc agc aa ln Leu Ser Ly 295	a aag aca gtg ttt s Lys Thr Val Phe 300	gtg atg aca cag 912 Val Met Thr Gln
ada tat gct aag a Lyg Tyr Ala Lys T 305	ct gag agt tt hr Glu Ser Ph 310	t aag atg gca ttt e Lys Met Ala Phe 315	tat ttg tct cat 960 Tyr Leu Ser His 320
cag agg ctc ctg g Gln Arg Leu Leu A	gat gaa aaa gt Asp Glu Lys Va 225	g gat gtg att ato l Asp Val Ile Ile 330	ttg ata ttc ttg 1008 Leu Ile Phe Leu 335
gaa aga cct ctt c Glu Arg Pro Leu G 340	cag aag tct aa Bln Lys Ser Ly	ng ttt ctt cag cto vs Phe Leu Gln Leo 345	agg aag aga ctc 1056 Arg Lys Arg Leu 350
tgc agg agc tct g Cys Arg Ser Ser \ 355	vai Leu Giu i	gg cct gca aat cc rp Pro Ala Asn Pr 60	a cag gct cac cca 1104 o Gln Ala His Pro 365
tac ttc tgg cag t Tyr Phe Trp Gln (370	tgc ctg aaa a Cys Leu Lys A 375	at gcc ctg acc ac sn Ala Leu Thr Th 38	a gac aat cat gtg 1152 r Asp Asn His Val 0
gct tat agt caa Ala Tyr Ser Gln	atg ttc aag g Met Phe Lys G	aa aca gtc tagcto lu Thr Val	tctg aagaatgtca 1202

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120

Phe Leu Cys Asn Cys Asp Ala Val Trp Phe Val Trp Trp Val Asn His 135 130 Thr Asp Val Thr Ile Pro Tyr Leu Ala Thr Asp Val Thr Cys Val Gly 150 145 Pro Gly Ala His Lys Gly Gln Ser Val Ile Ser Leu Asp Leu Tyr Thr Cys Glu Leu Asp Leu Thr Asn Leu Ile Leu Phe Ser Val Ser Ile Ser Ser Val Leu Phe Leu Met Val Val Met Thr Thr Ser His Leu Phe Phe 200 195 Trp Asp Met Trp Tyr Ile Tyr Tyr Phe Trp Lys Ala Lys Ile Lys Gly 210 Tyr Pro Ala Ser Ala Ile Pro Trp Ser Pro Cys Tyr Asp Ala Phe Ile 230 225 Tyr Asp Thr Lys Asn Ser Ala Val Thr Glu Trp Val Leu Gln Glu 245 Leu Val Ala Lys Leu Glu Asp Pro Arg Glu Lys His Phe Asn Leu Cys 265 260 Leu Glu Glu Arg Asp Trp Leu Pro Gly Gln Pro Val Leu Glu Asn Leu Ser Gln Ser Ile Gln Leu Ser Lys Lys Thr Val Phe Val Met Thr Gln 295 290 Lys Tyr Ala Lys Thr Glu Ser Phe Lys Met Ala Phe Tyr Leu Ser His 310 305 Gln Arg Leu Leu Asp Glu Lys Val Asp Val Ile Ile Leu Ile Phe Leu 325 Glu Arg Pro Leu Gln Lys Ser Lys Phe Leu Gln Leu Arg Lys Arg Leu 345 Cys Arg Ser Ser Val Leu Glu Trp Pro Ala Asn Pro Gln Ala His Pro Tyr Phe Trp Gln Cys Leu Lys Asn Ala Leu Thr Thr Asp Asn His Val 375 370 Ala Tyr Ser Gln Met Phe Lys Glu Thr Val

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                                         10
ggaltgg tca gat tca tac acc tgt gaa tac cct tta aac cta agg gga
                                                                    97
Gly Trp Ser Asp Ser Tyr Thr Cys Glu Tyr Pro Leu Asn Leu Arg Gly
                                   25
              20
   J
 ace agg tta aaa gac gtt cat ctc cac gaa tta tct tgc aac aca gct
                                                                     145
 Thr Arg Leu Lys Asp Val His Leu His Glu Leu Ser Cys Asn Thr Ala
          35
 ctg ttg att gtc acc att gtg gtt att atg cta gtt ctg ggg ttg gct
                                                                     193
 Lew Leu Ile Val Thr Ile Val Val Ile Met Leu Val Leu Gly Leu Ala
  !...!:
 gta gcc ttc tgc tgt ctc cac ttt gat ctg ccc tgg tat ctc agg atg
                                                                     241
 Val Ala Phe Cys Cys Leu His Phe Asp Leu Pro Trp Tyr Leu Arg Met
                       70
 cta ggt caa tgc aca caa aca tgg cac agg gtt agg aaa aca acc caa
                                                                     289
 Leu Gly Gln Cys Thr Gln Thr Trp His Arg Val Arg Lys Thr Thr Gln
                   85
 gaa caa ctc aag aga aat gtc cga ttc cac gca ttt att tca tac agt
                                                                     337
 Glu Gln Leu Lys Arg Asn Val Arg Phe His Ala Phe Ile Ser Tyr Ser
                                   105
              100
 gaa cat gat tot ctg tgg gtg aag aat gaa ttg atc ccc aat cta gag
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 Glu His Asp Ser Leu Trp Val Lys Asn Glu Leu Ile Pro Asn Leu Glu
                               120
          115
  aag gaa gat ggt tct atc ttg att tgc ctt tat gaa agc tac ttt gac
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  Lys Glu Asp Gly Ser Ile Leu Ile Cys Leu Tyr Glu Ser Tyr Phe Asp
                           135
      130
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	Lys	Ser	TTE	165	vaı	пец	Der		170					175		529
tgc Cys	cat His	tat Tyr	gaa Glu 180	ttc Phe	tac Tyr	ttt Phe	gcc Ala	cac His 185	cac His	aat Asn	ctc Leu	ttc Phe	cat His 190	gaa Glu	aat Asn	577
tct Ser	gat Asp	cac His	Ile	att Ile	ctt Leu	atc Ile	tta Leu 200	ctg Leu	gaa Glu	ccc Pro	att Ile	cca Pro 205	ttc Phe	tat Tyr	tgc Cys	625
att Ile	ccc Pro 210	acc Thr		tat Tyr	cat His	aaa Lys 215	ДСи	raa Xaa	gct Ala	ctc Leu	ctg Leu 220	gaa Glu	aaa Lys	aaa Lys	gca Ala	673
tac Tyr 225	ttg		tgg Trp	g ccc	aag Lys 230	Hor	agg Arg	cgt Arg	aaa Lys	tgt Cys 235	_	g ctt 7 Lei	tty 1 Xaa	tgg Trp	g gca Ala 240	721
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tali Tya	gaa Gl	a cto u Le	g cag u Gli 26	n Th	a tto r Pho	aca E Th	a gaq r Gli	g tta ı Le 26		t gaa n Gl	a gag u Gl	g tc u Se	t cg r Ar 27	a gg g Gl	t tct y Ser	817
The	a at	c ty e Xa 27	t ct a Le	o at	g ag t Ar	a ac g Th	a ga r As 28	P .	t yt s Xa	a ta a	aaat	ccca	cag	tcct	tgg	867
		21	J			atat	taaa	at o	taca	ttga	t ac	aacc	ttta	tga	.tggca	at 927
ga	agtt	9999	acc	acat	aca	cigi		~- +	2++0	ectt	c aa	aaaa	aaaa	aaa	aaaaa	aa 987
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aa	aaaa	aaaa	a aa													
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Leu Leu Ile Val Thr Ile Val Val Ile Met Leu Val Leu Gly Leu Ala 50 55

Val Ala Phe Cys Cys Leu His Phe Asp Leu Pro Trp Tyr Leu Arg Met
65 70 75 80

Leu Gly Gln Cys Thr Gln Thr Trp His Arg Val Arg Lys Thr Thr Gln
85 90 95

Glu Gln Leu Lys Arg Asn Val Arg Phe His Ala Phe Ile Ser Tyr Ser 100 105 110

Glu His Asp Ser Leu Trp Val Lys Asn Glu Leu Ile Pro Asn Leu Glu 115 120 125

Lys Glu Asp Gly Ser Ile Leu Ile Cys Leu Tyr Glu Ser Tyr Phe Asp

Pro Gly Lys Ser Ile Ser Glu Asn Ile Val Ser Phe Ile Glu Lys Ser 145 150 155 160

Typ Lys Ser Ile Phe Val Leu Ser Pro Asn Phe Val Gln Asn Glu Trp
165
170
175

Cys His Tyr Glu Phe Tyr Phe Ala His His Asn Leu Phe His Glu Asn 180

Ser Asp His Ile Ile Leu Ile Leu Leu Glu Pro Ile Pro Phe Tyr Cys 200 205

I Pro Thr Arg Tyr His Lys Leu Xaa Ala Leu Leu Glu Lys Lys Ala 210 215

Tyr Leu Glu Trp Pro Lys Asp Arg Arg Lys Cys Gly Leu Xaa Trp Ala 225 230 230

Asn Leu Arg Ala Ala Val Asn Val Asn Val Leu Ala Thr Arg Glu Met 245 250 255

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atc ago tto gtg gcc ccc ggc tto ttt tcc aag gcc aag gag ctg cga
                                                                    96
Ile Ser Phe Val Ala Pro Gly Phe Phe Ser Lys Ala Lys Glu Leu Arg
                                  25
              20
 gag ctc aac ctt agc gcc aac gcc ctc aag aca gtg gac cac tcc tgg
                                                                    144
 Gla Leu Asn Leu Ser Ala Asn Ala Leu Lys Thr Val Asp His Ser Trp
          35
 tet ggg ccc ctg gcg agt gcc ctg caa ata cta gat gta agc gcc aac
                                                                    192
 Phe Gly Pro Leu Ala Ser Ala Leu Gln Ile Leu Asp Val Ser Ala Asn
      50
 cet ctg cac tgc gcc tgt ggg gcg gcc ttt atg gac ttc ctg ctg gag
  £
                                                                    240
 Pro Leu His Cys Ala Cys Gly Ala Ala Phe Met Asp Phe Leu Leu Glu
                      70
  65
 gtg cag gct gcc gtg ccc ggt ctg ccc agc cgg gtg aag tgt ggc agt
                                                                     288
 Val Gln Ala Ala Val Pro Gly Leu Pro Ser Arg Val Lys Cys Gly Ser
                  85
 ccg ggc cag ctc cag ggc ctc agc atc ttt gca cag gac ctg cgc ctc
                                                                     336
 Pro Gly Gln Leu Gln Gly Leu Ser Ile Phe Ala Gln Asp Leu Arg Leu
                                  105
              100
 tgc ctg gat gag gcc ctc tcc tgg gac tgt ttc gcc ctc tcg ctg
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 Cys Leu Asp Glu Ala Leu Ser Trp Asp Cys Phe Ala Leu Ser Leu Leu
                              120
          115
  gct gtg gct ctg ggc ctg ggt gtg ccc atg ctg cat cac ctc tgt ggc
                                                                     432
  Āla Val Āla Leu Gly Leu Gly Val Pro Met Leu His His Leu Cys Gly
                                               140
                          135
      130
  tgg gac ctc tgg tac tgc ttc cac ctg tgc ctg gcc tgg ctt ccc tgg
                                                                     480
  Trp Asp Leu Trp Tyr Cys Phe His Leu Cys Leu Ala Trp Leu Pro Trp
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_						150					155					160		
	L45 Egg Arg	ggg ggg	cgg Arg	caa Gln	Ser		cga Arg	gat Asp	gag Glu	gat Asp 170	gcc Ala	ctg Leu	ccc Pro	tac Tyr	gat Asp 175	gcc Ala	528	8
				•	100					~~~	ata	aca	gac	tgg Trp 190	ata	tac	57	6
	aac Asn	gag Glu	ctt Leu 195	Arg	Gly 333	cag Gln	ctg Leu	gag Glu 200		tgc Cys	cgt Arg	ggg ggg	cgc Arg 205	tgg Trp	gca Ala	ctc Leu	62	4
	cgc Arg	ctg Leu 210	. Сув	ctg Leu	gag Glu	gaa Glu	cgc Arg 215	1101	tgg Trp	ctg Leu	cct Pro	ggc Gly 220	aaa Lys	acc Thr	ctc Leu	ttt Phe-	 	'2
	gag Glu 225	aac Asr		g tgg ı Trp	g gcc Ala	tcg Ser 230		tat Tyr	ggc Gly	ago Ser	cgc Arc	aaç J Lys	acg Thr	ctg Lev	ttt Phe	gtg Val 240	72	20
	ctd Lei	g gco	c ca a Hi	c acq s Thi	g gad r Ası 24!) Ard	g gto g Val	agt L Sei	ggt Gly	cto Lev 250	tto Lev	g cgo	g Ala	a Ser	tto Phe 259	ctg Leu	7	68
	ctro Les		c ca a Gl	g ca n Gl 26	g cg n Ar		g cte	g gaq u Gl	g gad u Asj 26		c aa g Ly	g ga s As	c gto p Va	c gto l Va 27	g gte l Va 0	g ctg l Leu	8	16
	٧a	g at l Il	c ct e Le 27	g ag u Se		t ga o As	c gg	c cg y Ar 28	5	c tc g Se	c cg r Ar	c ta g Ty	c gk r Xa 28	g cg a Ar 5	g ct g Le	g cgc u Arg	: 8 J	64
	C Ca G1	g cg n Ar 29	jc ct		jc cg zs Ar	ıc ca g Gl	.11 50	jt gt er Va	c ct l Le	c ct u Le	c to u Tr	g co p Pr 30	c ca o Hi	c ca s Gl	g cc n Pr	c agt	: S	912
	30 G1	jt ca y G.		gc ag rg Se	gc tt er Pl	16 11	gg gg	cc ca la Gl	ag ct In Le	g gg eu G	gc at Ly Me 31	ig go et Al	cc ct la Le	g ac eu Th	ec ag nr Ai	gg gad cg As 32	_	960
			ac c is H	ac t is P	ne i	at aa yr A	ac co	gg aa rg A	ac tt sn Pl	cc to ne C	gc c ys G	ag g ln G	ga co ly P:	cc ac ro Tl	cg go hr Al	cc ga la Gl 35		1008
		acc	ataa	a cc			gca	cggt	gcc ·	acct	ccac	ac t	cacc	tcac	c tc	tgcct	gcc	1068
	L.	agee	tasa	e ct	cccc	tact	cgc	ctcc	ctc	acco	caca	icc t	gaca	caga	g ca	ggcac	ctca	1128
	ر ا	yy.c	taat	a cc	gaao	gcta	. aaa	ıaaaa	aaa	aaaa	aaaa	aa a	anna	L				1173
	. a	Laac	g u (JJ													

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Leu Ala Gln Gln Arg Leu Leu Glu Asp Arg Lys Asp Val Val Leu
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Val Ile Leu Ser Pro Asp Gly Arg Arg Ser Arg Tyr Xaa Arg Leu Arg
        275
Gln Arg Leu Cys Arg Gln Ser Val Leu Leu Trp Pro His Gln Pro Ser
                        295
    290
Gly Gln Arg Ser Phe Trp Ala Gln Leu Gly Met Ala Leu Thr Arg Asp
                                         315
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305
Asn His His Phe Tyr Asn Arg Asn Phe Cys Gln Gly Pro Thr Ala Glu
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 cgreecegeta tgtgcgactg cgccagcgtc tctgccgcca gagtgtgctc ttctggcccc 180
 agggacccaa cgggcagggg ggcttctggg cccagctgag tacagccctg actagggaca 240
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 cagetggaaa cagetgcate tteatgtetg gtteeegagt tgetetgeet geettgetet 360
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Met Leu Thr Cys Ile Phe Leu Leu Ile Ser Gly Ser Cys Glu Leu Cys
                             -10
        -15
gcc gaa gaa aat ttt tct aga agc tat cct tgt gat gag aaa aag caa
                                                                    96
Ala Glu Glu Asn Phe Ser Arg Ser Tyr Pro Cys Asp Glu Lys Lys Gln
aa gac tca gtt att gca gag tgc agc aat cgt cga cta cag gaa gtt
                                                                    144
Ash Asp Ser Val Ile Ala Glu Cys Ser Asn Arg Arg Leu Gln Glu Val
                  20
 coe caa acg gtg ggc aaa tat gtg aca gaa cta gac ctg tct gat aat
                                                                    192
 Pro Gln Thr Val Gly Lys Tyr Val Thr Glu Leu Asp Leu Ser Asp Asn
                                   40
              35
  经
 tto atc aca cac ata acg aat gaa tca ttt caa ggg ctg caa aat ctc
                                                                     240
 Phe Ile Thr His Ile Thr Asn Glu Ser Phe Gln Gly Leu Gln Asn Leu
 act aaa ata aat cta aac cac aac ccc aat gta cag cac cag aac gga
                                                                     288
 Thr Lys Ile Asn Leu Asn His Asn Pro Asn Val Gln His Gln Asn Gly
      65
 aat ccc ggt ata caa tca aat ggc ttg aat atc aca gac ggg gca ttc
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 Asn Pro Gly Ile Gln Ser Asn Gly Leu Asn Ile Thr Asp Gly Ala Phe
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  80
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                                                                     384
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                  100
  ccc caa ata ccc tct ggt ttg cca gag tct ttg aca gaa ctt agt cta
                                                                      432
  Pro Gln Ile Pro Ser Gly Leu Pro Glu Ser Leu Thr Glu Leu Ser Leu
                                   120
              115
                                                                      480
  att caa aac aat ata tac aac ata act aaa gag ggc att tca aga ctt
  Ile Gln Asn Asn Ile Tyr Asn Ile Thr Lys Glu Gly Ile Ser Arg Leu
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          130
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tt tgc gag aaa act aac ata gaa gat gga gta ttt gaa acg ctg aca 576 tt tgc gag aaa act aac ata gaa gat gga gta ttt gaa acg ctg aca 576 tt tgc gag aaa act aac ata gaa gat gga gta ttt gaa acg ctg aca 576 tt tgc gag aaa act aac ata gaa gat gga gta ttt gaa acg ctg aca 576 170 175
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cc aaa ctg cca agc tcc cta cgc aaa ctt ttt ctg agc aac acc cag 672 Fro Lys Leu Pro Ser Ser Leu Arg Lys Leu Phe Leu Ser Asn Thr Gln
195 Atc aaa tac att agt gaa gaa gat ttc aag gga ttg ata aat tta aca 720 Atc aaa tac att agt gaa gaa gat ttc aag gga ttg ata aat tta aca 720 Ile Lys Tyr Ile Ser Glu Glu Asp Phe Lys Gly Leu Ile Asn Leu Thr 220 220
tta da gat tta agc ggg aac tgt ccg agg tgc ttc aat gcc cca ttt 768 tta da gat tta agc ggg aac tgt ccg agg tgc ttc aat gcc cca ttt 768 tta da gat tta agc ggg aac tgt ccg agg tgc ttc aat gcc cca ttt 768
cca fgc gtg cct tgt gat ggt gct tca att aat ata gat cgt ttt 816 cca fgc gtg cct tgt gat ggt gly Ala Ser Ile Asn Ile Asp Arg Phe pro gys Val Pro Cys Asp Gly Gly Ala Ser 250 255
245 240 240 245 240 245 240 245 240 245 245 245 245 245 245 245 245 245 245
tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912 tcc_ctc agg aag att aat gct gcc tgg ttt aaa aat atg cct cat ctg 912
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310 305 310 ttt aac tat ata aag ggg agt tat cca cag cat att aat att tcc aga 1056 Phe Asn Tyr Ile Lys Gly Ser Tyr Pro Gln His Ile Asn Ile Ser Arg 335 335
aac ttc tct aaa ctt ttg tct cta cgg gca ttg cat tta aga ggt tat 1104 aac ttc tct aaa ctt ttg tct cta cgg gca ttg cat tta aga ggt tat 1104 Asn Phe Ser Lys Leu Ser Leu Arg Ala Leu His Leu Arg Gly Tyr 340 340

.

•															•					
al I	Phe	Gln	355	ьес	aga Arg	, GI	u A	чэр	360						36	5				1152
ca a	aac Asn	tta Leu 370	tcg Ser	act Thi	ato Ile	c aa e As	il T	tg Leu 375	ggt Gly	at Il	t a e A	at sn	ttt Phe	att Ile 380	aa Ly	rs G	aa In	at Il	c e	1200
sp	ttc Phe 385	_	ctt Lev	tto Pho	c caa e Gli	II M	at t sn I	tc Phe	tcc Ser	aa As	t c n L	tg eu	gaa Glu 395	att	at Il	t t le T	ac Tyr	tt Le	g u	1248
		aac Asr	aga Arg	a at	a tc e Se 40	L F.	eg t ro 1	ttg Leu	gta Val	aa Ly		jat Asp 110	acc Thr	cgg	g ca g G.	ag a ln s	agt Ser	ta Ty 41	r .5	1296
	aat Asn	agt Sei	tc Se	c tc r Se 42	t tt r Ph 0	t c e G	aa ln	cgt Arg	cat His	at 3 I] 42		gg Arg	aaa Lys	cg: Ar	a co	gc i	tca Ser 430	ac Tł	ea nr	1344
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tta Leu	Eta Ele	aa Ly 45	s Pr	a ca o Gl	aa to ln Cy	gt g ys A	ıct la	gct Ala 455	1	t g r G	ga ly	aaa Lys	gco	c tt a Le 46	a g u A	at	tta Leu	ag S	gc er	1440
ctc Leu		ag n Se		t ti	tc t ne P	116	att [le 170	ggg	g cc y Pr	a a o A	ac .sn	caa Glr	tt n Ph	t ga e Gl 5	a a .u A	aat Asn	ctt Lev	c n P	ct ro	1488
gac Asp 480	is at atl		c to	gt t ys L	ta a eu A 4	at o sn 1 85	ctg Leu	tc: Se:	t go r Al	a a a A	at Sn	ago Sei 490	c aa c As O	t go	ct (la (caa Gln	gto Val	g t l L 4	ta eu 95	1536
	•	a ac y Th	et g ir G	tu P	tt t he S	ca er	gcc Ala	at Il	t co e Pi		cat His	gt. Va	c aa l Ly	a ta	at ! yr :	ttg Leu	gat As _] 51	t t p I 0	tg Leu	1584
aca Th	a aa r As	c a	sn A	ga c rg I 15	ta s Leu <i>P</i>	jac Asp	ttt Phe	ga As	٠٠- ٢	at g sn 1 20	gct Ala	ag Se	t go r Al	ct c la L	tt . eu	act Thr 525	ga Gl	a t u I	tg Leu	1632
tc Se	c ga r As	sp L			gtt (Val]	cta Leu	gat Asp	ct 5 Le 53	. u. D	gc er	tat Tyr	aa As	t to n Se	ca c er H	ac is 40	tat Tyr	tt Ph	.c i	aga Arg	1680
at Il	e A			gta : /al '	aca Thr	cat His	cat His	ים כ	ta g eu G	aa lu	ttt Phe	at : I]	t c Le G 5	aa a ln <i>P</i> 55	aat Asn	tto Phe	c ac e Th	ea nr	aat Asn	1728
ct Le			jtt (/al :	tta Leu	aac Asn	ttg Leu	ag Se	c c r H	ac a is P	ac Asn	aac Asr	at n I	tt t le T	at a 'yr '	act Thr	tt: Le	a ac u Tì	ca hr	gat Asp	1776

560	565	570 575
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	aag aat ctg aca cgt Lys Asn Leu Thr Arg 615	t ctg gat tta tcc ctt aat 1920 g Leu Asp Leu Ser Leu Asn 620
	c cca aat gaa gca tto e Pro Asn Glu Ala Phe 630	c ctt aat ttg cca gcg agt 1968 e Leu Asn Leu Pro Ala Ser 635
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, 1001	Il Pile FIO mig 200	ng ttg ctt gac tta cgt gga 2064 Lu Leu Leu Asp Leu Arg Gly 670
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	2496
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Phe tle Thr His Ile Thr Asn Glu Ser Phe Gln Gly Leu Gln Asn Leu 55 60

Thr Lys Ile Asn Leu Asn His Asn Pro Asn Val Gln His Gln Asn Gly
70
75

Asn Fro Gly Ile Gln Ser Asn Gly Leu Asn Ile Thr Asp Gly Ala Phe 85

Leu Asn Leu Lys Asn Leu Arg Glu Leu Leu Glu Asp Asn Gln Leu 100 105 110

Pro Gln Ile Pro Ser Gly Leu Pro Glu Ser Leu Thr Glu Leu Ser Leu 115 120 125

Ile Gln Asn Asn Ile Tyr Asn Ile Thr Lys Glu Gly Ile Ser Arg Leu 130 135 140

Ile Asn Leu Lys Asn Leu Tyr Leu Ala Trp Asn Cys Tyr Phe Asn Lys 145 150

Val Cys Glu Lys Thr Asn Ile Glu Asp Gly Val Phe Glu Thr Leu Thr 160 165 170 175

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470

465

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Thr Asn Asn Arg Leu Asp Phe Asp Asn Ala Ser Ala Leu Thr Glu Leu 525
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Ile Ala Gly Val Thr His His Leu Glu Phe Ile Gln Asn Phe Thr Asn 545 550 555
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Lys Tyr Asn Leu Glu Ser Lys Ser Leu Val Glu Leu Val Phe Ser Gly 580 580
Asn Arg Leu Asp Ile Leu Trp Asn Asp Asp Asp Asn Arg Tyr Ile Ser 600 605
Ile Phe Lys Gly Leu Lys Asn Leu Thr Arg Leu Asp Leu Ser Leu Asn 620
Arg Leu Lys His Ile Pro Asn Glu Ala Phe Leu Asn Leu Pro Ala Ser 635 635
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Thr Leu Leu Gln Gln Phe Pro Arg Leu Glu Leu Leu Asp Leu Arg Gly 660 665 670
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Leu Arg Thr Leu Leu Ser His Asn Arg Ile Ser His Leu Pro Ser 690 695 700
Gly Phe Leu Ser Glu Val Ser Ser Leu Lys His Leu Asp Leu Ser Ser 715
Asn Leu Leu Lys Thr Xaa Asn Lys Ser Ala Leu Glu Thr Lys Thr Thr 735 730 735
Thr Lys Leu Ser Met Leu Glu Leu His Gly Asn Pro Phe Glu Cys Thr 740 745 750
Cys Asp Ile Gly Asp Phe Arg Arg Trp Met Asp Glu His Leu Asn Val 755 760 765

Lys Ile Pro Arg Leu Val Asp Val Ile Cys Ala Ser Pro Gly Asp Gln 775 770 Arg Gly Lys Ser Ile Val Ser Leu Glu Leu Thr Thr Cys Val Ser Asp 790 Val Thr Ala Val Ile Leu Phe Phe Phe Thr Phe Phe Ile Thr Thr Met Val Met Leu Ala Ala Leu Ala His His Leu Phe Tyr Trp Asp Val Trp 825 Phe Ile Tyr Asn Val Cys Leu Ala Lys Leu Lys Gly Tyr Arg Ser Leu 840 835 Ser Thr Ser Gln Thr Phe Tyr Asp Ala Tyr Ile Ser Tyr Asp Thr Lys 855 850 Asp Ala Ser Val Thr Asp Trp Val Ile Asn Glu Leu Arg Tyr His Leu 870 Glu clu Ser Arg Asp Lys Asn Val Leu Leu Cys Leu Glu Glu Arg Asp 890 885 880 ₩ Trp Asp Pro Gly Leu Ala Ile Ile Asp Asn Leu Met Gln Ser Ile Asn 900 Gln Ser Lys Lys Thr Val Phe Val Leu Thr Lys Lys Tyr Ala Lys Ser 920 Trp=Asn Phe Lys Thr Ala Phe Tyr Leu Ala Leu Gln Arg Leu Met Gly 935 Glu Asn Met Asp Val Ile Ile Phe Ile Leu Leu Glu Pro Val Leu Gln 950 945 His Ser Pro Tyr Leu Arg Leu Arg Gln Arg Ile Cys Lys Ser Ser Ile 965 960 Leu Gln Trp Pro Asp Asn Pro Lys Ala Glu Gly Leu Phe Trp Gln Thr 985 Leu Arg Asn Val Val Leu Thr Glu Asn Asp Ser Arg Tyr Asn Asn Met 1000

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1010

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itetteatea tteatatgag gaaataagtg gtaaaateet tggaaataea atg aga
                                                                   116
etc atc aga aac att tac ata ttt tgt agt att gtt atg aca gca gag
                                                                    164
Seu He Arg Asn Ile Tyr Ile Phe Cys Ser Ile Val Met Thr Ala Glu
                             -10
        -15
ggt gat gct cca gag ctg cca gaa gaa agg gaa ctg atg acc aac tgc
                                                                    212
Gly Asp Ala Pro Glu Leu Pro Glu Glu Arg Glu Leu Met Thr Asn Cys
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tcc aac atg tct cta aga aag gtt ccc gca gac ttg acc cca gcc aca
                                                                    260
Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp Leu Thr Pro Ala Thr
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Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu Phe Gln Leu Gln Ser Ser
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Asp Phe His Ser Val Ser Lys Leu Arg Val Leu Ile Leu Cys His Asn
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                                                                     452
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 Arg Tyr Leu Asp Leu Ser Asn Asn Arg Leu Lys Ser Val Thr Trp Tyr
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  80
 tta ctg gca ggt ctc agg tat tta gat ctt tct ttt aat gac ttt gac
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                  100
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 Thr Met Pro Ile Cys Glu Glu Ala Gly Asn Met Ser His Leu Glu Ile
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115 120 125

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Ile_Lys Thr	tca aaa ata Ser Lys Ile 195	tta gaa atg Leu Glu Met 200		gat ggc aaa Asp Gly Lys 205	agc 788 Ser
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240 C cag atc cga Gln Ile Arg		ttt ggt gg	gt aag get ta Ly Lys Ala Ty 265	at ctt gac ca or Leu Asp Hi 27	c aat 980 s Asn 0
tca ttt gac Ser Phe Asp		7 TYYE	tg aga act at et Arg Thr I 80	ta aaa ttg ga le Lys Leu Gl 285	g cat 1028 u His
Val His Phe	aga gtg tt Arg Val Ph	t tac att c e Tyr Ile G 295	aa cag gat a ln Gln Asp L	aa atc tat tt ys Ile Tyr Le 300	eu Leu
ttg acc aaa Leu Thr Lys 305		a gaa aac c e Glu Asn I 310	tg aca ata t eu Thr Ile S	ca aat gca c Ser Asn Ala G 315	aa atg 1124 ln Met
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ttc att ctc agc cca tct ctg gat ttt gtt cag agc tgc cag gaa gtt Phe Ile Leu Ser Pro Ser Leu Asp Phe Val Gln Ser Cys Gln Glu Val 485 490 495	1652
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aaa aat ttc att cag ctt gaa aca tat tca gag gtc atg atg gtt gga Lys Asn Phe Ile Gln Leu Glu Thr Tyr Ser Glu Val Met Met Val Gly 525	1748
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agg tta aaa gac gtt cat ctc cac gaa tta tct tgc aac aca gct ctg	1844

						4								•									
A		Leu 545	Lу	s A	Asp	Val	His	L 5	eu I 50	His	Glu	Le	eu s	Ser	Су 55	s <i>I</i>	Asn	Thi	: A	la :	Le	u	
L	tg eu 60	att Ile	gt Va	c a	acc Thr	att Ile	gtg Val	. v	tt (att Ile	atg Met	ci Le	Cu	gtt Val 570	ct Le	.g g	31y 999	tto Lei	9 9 1 A	ct la	gt Va 57	g 1 15	1892
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ç	ıgt Hy	caa Gln	te C	gc ys	aca Thr 595	caa Gln	aca Th:	a t	gg Crp	cac His	agg Arg	v	tt al	agg Arg	aa Ly	aa ys	aca Thr	ac Th 60	c (r (5	caa 31n	ga G]	aa Lu	1988
(caa Gln	ctc Leu	L	ag ys 10	aga Arg	aat Asn	gt Va	c (cga Arg	ttc Phe 615	cac	: 9 : A	gca Ala	ttt Phe	at I	tt le	tca Ser 620	ta Ty	c a	agt Ser	ga G	aa lu	2036
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	4	=: =:	a a s S	agc Ser	att Ile	agt Se:	נטיי	ıa .u	aat Asn	att Ile	gt Va		agc Ser 665		c a e I	itt [le	gaç	g aa 1 Ly	aa ys	agc Ser 670	t T	at 'yr	2180
	aa Ly⊈	§ Se	c a	atc Ile	ttt Phe	e va	t tt l Le	eu	tct Ser	cco Pro	aa As 68		ttt Phe	gt. Va	c (cag Gln	aat Ası	n G 6	ag lu 85	tgg Trp	t	gc Cys	2228
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			aa lu	tg:	g cc p Pr	о п	ag s ys <i>1</i>	jat Asp	ag Ar	g cg g Ar	gt a g L	aa ys	tg Cy 74		r aa	ct! Le:	t tt u Pł	c t ne :	.gg Trp	gc. Al 75	a a 0	aac Asn	2420
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 Ala Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu Phe Gln Leu Gln
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Cys	Ser	Trp	Pro	Glu	Thr	Val	Val 405	Asn	Met	Asn	Leu	Ser 410	Tyr	Asn	Lys
Leu	Ser 415	Asp	Ser	Val	Phe	Arg 420	Cys	Leu	Pro	Lys	Ser 425	Ile	Gln	Ile	Leu
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Al	a Va	l A]	ia Ph	ье Су	s Cy	s Le	u Hi O	s Ph	e As	р Ге	u Pr	o Tr	р Ту	r Le	u Arg
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Asn Ser Asp His Ile Ile Leu Ile Leu Leu Glu Pro Ile Pro Phe Tyr
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Cys Ile Pro Thr Arg Tyr His Lys Leu Lys Ala Leu Leu Glu Lys Lys
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109

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gga a Gly F -1			ttt Phe	gca Ala	gta Val 5	gac Asp	aag Lys	tca Ser	aaa Lys	aga Arg 10	ggt Gly	ctt	z at ı I:	tt le	cat His	gtt Val 15	20	5		
cca a		gac Asp	cta Leu	ccg Pro 20	ctg Leu	aaa Lys	acc Thr	aaa Lys	gtc Val 25	tta Leu	gat Asp	ate Me	g to	ct er	cag Gln 30	aac Asn	25	3		
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aca Thr	Val	ttg Leu 50	aga Arg	ctt Leu	tcc Ser	cat His	aac Asn 55	LALG	atc Ile	cag Gln	cta Leu	ct Le	t g u A	at sp	tta Leu	agt Ser		19		
gtt Val	Etc Phe 65			aac Asr	c caç ı Glr	g gat n Asp 70	л пс	ı gaa ı Glu	tat Tyr	ttg Leu	gat Asp 75	_	a t	ct Ser	cat His	aat Asr	; 3 1	97		9
cag Gln	ttg Leu	caa Glr	aag Lys	g ata 3 Ile	a tco e Sei 8!	r Cy	c cat s His	cet F Pro	att Ile	gtg Val		t tt	c a ne <i>P</i>	agg Arg	cat His	tta Lei 9:	a 4	45		
		tca Sei	a tto	aat Asi 10	n As	t tt p Ph	c aa e Ly	g gco s Ala	c cts a Leu 105	^ ~ -	ate	e Cy	gt a ys 1	aag Lys	gaa Glu 110	a tti ı Pho	t 4	93		
	aac Asn	tta Le	a tca u Se:	r GI	a ct n Le	g aa u As	t tt n Ph	c tto e Lei 12	w	a ttg y Lei	g ag u Se	t g r A	ct la i	atg Met 125	aag Lys	g cto	g 5 u	141		
caa Gln	aaa Lys	tta Le	a ga u As		g ct u Le	g co u Pr	a at o Il 13	t gc e Al	t cad a Hi	c tte	g ca u Hi	t c s L 1	ta eu 40	agt Ser	tat Ty:	t at r Il	c s e	89		
ctt Leu	cto Lev	g ga ı As		a ag u Ar	ja aa :g As	it ta sn Ty 15	,τ τ Σ	it at r Il	a aa e Ly	a ga s Gl	a aa u As 15		ag lu	aca Thi	a ga c Gl	a ag u Se	_	637		
cta Lev 160	ca Gl:		t ct e Le	g aa eu As	sn A.	ca aa la Ly 55	aa ao ys Tl	ec et nr Le	t ca eu Hi	c ct s Le		it t	tt Phe	cac Hi	c cc s Pr	a ac o Th		685		
		a tt u Ph	c go	ct at la I:	tc calle G	aa g ln V	tg a al A	ac at sn Il	ta to le Se	ca gt er Va	t a	at a sn '	act Thr	tt Le	a gg u Gl	gg to y C	ys	733		

180 185 190

		180			7	.00							
:ta caa ct .eu Gln Le	g act eu Thr 195	aat att Asn Ile	aaa Lys	Dea .	aat g Asn <i>A</i> 200	gat o	gac Asp	aac Asn	tgt Cys	caa Gln 205	gtt Val	ttc Phe	781
itt aaa ti [le Lys Pl	tt tta he Leu 10	tca gaa Ser Glu	ctc Leu	acc Thr 215	aga g Arg (ggt Gly	cca Pro	acc Thr	tta Leu 220	ctg Leu	aat Asn	ttt Phe	829
acc ctc a Thr Leu A 225	ac cac sn His	ata gaa Ile Gli	a acg 1 Thr 230	act Thr	tgg a	aaa Lys	tgc Cys	ctg Leu 235	gtc Val	aga Arg	gtc Val	ttt Phe	877
caa ttt c Gln Phe L 240	tt tgg eu Trp	ccc aa Pro Ly 24	s Pro	gtg Val	gaa Glu	tat Tyr	ctc Leu 250	aat Asn	att Ile	tac Tyr	aat Asn	tta Leu 255	925
aca ata a Thr Ile I	tt gaa le Glu	agc at Ser Il 260	t cgt e Arg	gaa Glu	Gru	gat Asp 265	ttt Phe	act Thr	tat Tyr	tct Ser	aaa Lys 270	acg Thr	973
aca teg a Thr lieu I	aaa gca ys Ala 275	Leu In	a ata r Ile	gaa Glu	cat His 280	atc Ile	acg Thr	aac Asn	caa Gln	gtt Val 285	ttt Phe	ctg Leu	1021
ttt #c a (Phe S er (cag aca 31n Thi 290	gct tt	g tac u Tyr	acc Thr 295	val	ttt Phe	tct Ser	gag Glu	atg Met 300		att 11e	atg Met	1069
atg £ta : Met % eu '	acc att Thr Ile	t tca ga e Ser As	it aca sp Thi 310	PLO	ttt Phe	ata Ile	cac His	atg Met 315		tgt Cys	cct Pro	cat His	1117
gca Jeca Ala Pro 320	agc aca Ser Th	r hue ri	ag ttt 7s Phe 25	ttg e Lev	aac Asn	ttt Phe	acc Thr 330		g aac n Asr	gtt va:	t tto l Pho	e aca E Thr 335	1165
gat agt Asp Ser	att tt Ile Ph	t gaa a e Glu L 340	aa tgi ys Cya	t tco s Sei	acg Thr	tta Leu 345		t aaa l Lys	a tto s Lev	g ga ı Gl	g ac u Th 35	a ctt r Leu 0	1213
atc tta Ile Leu	caa aa Gln Ly 35	's Ash G	ga tt ly Le	a aaa u Lys	a gac s Asp 360		tto i Pho	c aaa e Lya	a gt s Va	a gg 1 Gl 36	t ct y Le 5	c atg u Met	1261
acg aag Thr Lys	gat at Asp Me	g cct t et Pro S	ct tt er Le	g ga u Gl 37	u	a cto	g ga u As	t gt p Va	t ag 1 Se 38	c tg r Tr 0	g aa p As	t tct n Ser	1309
ttg gaa Leu Glu 385	tct gg Ser G	gt aga d Ly Arg F	at aa Iis Ly 39	S GI	a aaq u Ası	c tg n Cy	c ac s Th	t tg ir Tr 39	F .	t ga il Gl	ag ag lu Se	gt ata er Ile	1357

					(•		
Val 400	Val	Leu	Asn	Leu	ser 405	ser	ASII	Mec		410	пор	001			4	115	1405	•
Cys	Leu	Pro	Pro	Arg 420	TTE	гуя	Val	пеп	gat Asp 425	ДСИ				43	30		1453	
Lys	Ser	Val	Pro 435	Lys	Gin	vai	Val	440		OIU	11,10		445	5			1501	
aat Asn	gtt Val	gct Ala 450	Phe	aat Asn	tct Ser	tta Leu	act Thr 455	ASP	ctt Leu	cct Pro	gga Gly	tgt Cys 460		: ac r Se	jc t er I	itt Phe	1549	
Ser	Ser 465	Leu	ı Ser	· Val	Leu	470	116	: Asp	cac His	ADII	475	5					1597	
tcg Ser 480	Ala	gat Asp	ttc , Ph∈	: ttc ≥ Ph∈	c cag e Gln 485	ı ser	tgc Cys	cag Gln	g aag n Lys	atg Met 490	3	tca Sei	ı ata	a aa e Lj	aa (ys	gca Ala 495	1645	
ggg ggg		aat Asr	. cca 1 Pro	a ttc o Phe 500	e GIII	tgt Cys	acc Thr	tgt Cys	gag Glu 505		. aga ı Arç	gaa Glu	a tti u Pho		tc al 10	aaa Lys	1693	
aat Asn	ata Lale	e Asp	p Glr	n Val	1 Ser	a agt r Ser	c Glu	a gtg u Val 520	g tta l Leu 0	ı gaç ı Glı	ı ggo	; tgg / Tr]	g cc p Pro 52	_	at sp	tct Ser	1741	
	aag Lys	g tgt s Cys 530	s Asp	c tac p Ty	e cca r Pro	ı gaa o Glı	a agt u Ser 535	т т л	t aga r Arc	g Gli	a ago y Se:	c cca r Pro 54	•	a a :u I	syr عرد	gac Asp	1789	
ttt Pho	t cad e His 54!	s Met	g tc t Se	t ga r Gl	a tta u Le	a tco u Sei 550	r Cys	s aac s As:	c ata n Ile	a act	t cto r Lev 55	u	g at u Il	.c ç .e ĭ	jtc ∕al	acc Thr	1837	
ato Ile 560	e Gl	t gc y Al	c ac a Th	c at ir Me	g ctg et Le 56	eu va.	g tto l Le	g gc u Al	t gto .a Va	g ac 1 Th 57	ir va	g ac l Th	:c to ir Se	c c er J	stc Leu	tgc Cys 575	1885	
at Il	c ta e Ty	c tt r Le	g ga :u As	at ct sp Le 58	eu Pr	c tg o Tr	g ta p Ty	t ct r Le	c agg eu Arg 58	g ne	g gt t Va	g tg ,1 C}	јс са /в G:	ag t ln '	tgg Trp 590	acc Thr	1933	
ca Gl	g ac n Th	t cg ir Ar	rg Ar	gc ag rg Ar 95	ig gc	:c ag .a Ar	g aa g As	ac at sn Il 60	ta cc le Pr 00	c tt	a ga su Gl	ia ga .u G.		tc eu 05	caa Gln	aga Arg		
aa	ic ct	C CE	ag ti	tt c	at go	st tt	t at;	:t to	ca ta	ıt aç	jt ga	aa c	at g	at	tct	gcc gcc	2029	

Asn Leu	610					615	•				620				
tgg gtg Trp Val 625	Lys	Ser	GIu	Leu	630	Pro	TÀT	пеп	GIU	635	Giu	nop		U	2077
att tgt Ile Cys 640	ctt Leu	cat His	gag Glu	agg Arg 645	aac Asn	ttt Phe	gtc Val	cct Pro	ggc Gly 650	aag Lys	agc Ser	att Ile	gtg Val	gaa Glu 655	2125
aat atc Asn Ile	atc Ile	aac Asn	tgc Cys 660	att Ile	gag Glu	aag Lys	agt Ser	tac Tyr 665	aag Lys	tcc Ser	atc Ile	ttt Phe	gtt Val 670	ttg Leu	2173
tct ccc Ser Pro	aac Asn	ttt Phe 675	Val	cag Gln	agt Ser	gag Glu	tgg Trp 680	tgc Cys	cat His	tac Tyr	gaa Glu	ctc Leu 685	tat Tyr	ttt Phe	2221
gcc cat Ala His	cac His 690	Asn	ctc Leu	ttt Phe	cat His	gaa Glu 695	gga Gly	tct Ser	aat Asn	aac Asn	tta Leu 700	atc Ile	ctc Leu	atc Ile	2269
tta Cto Leu Gleu Gos	ı Glu	ccc Pro	att Ile	cca Pro	cag Gln 710	Asn	agc Ser	att Ile	ccc Pro	aac Asn 715	пуъ	tac Tyr	cac His	aag Lys	2317
ctg Laag Leu Lys 720	g gct s Ala	cto Lev	atg Met	acg Thr 725	GIn	cgg Arg	act Thr	tat Tyr	ttg Leu 730	GIII	tgg Trp	ccc Pro	aag Lys	gag Glu 735	2365
aaa⊨ago Lys⊑Se: □	c aaa r Lys	cgt Arg	ggg Gly 740	, Let	ttt Phe	tgg Trp	gct Ala	aac Asn 745	TTE	aga Arc	gcc Ala	gct Ala	ttt Phe 750		2413
atg aa Met Ly	a tta s Lev	a aca ı Thi 75!	r Lei	a gto ı Val	act Thr	gaa Glu	a aac a Asr 760	I WOI	gat n Asp	gto Val	g aaa Lys	tct Ser 765			2455
taaaaa	aatt	tag	gaaat	tc a	aactt	aaga	aa a	ccatt	tattt	act	tgga	itga	tggt	gaatag	2515
tacagt															
taacaa															
agagac	agcc	cag	tctc	ttc	tggt	ttaa	tc a	ttat	gttt	c aa	attga	aaac	agt	ctcttt	2695
gagtaa	atgc	tca	gttt	ttc	agct	cctc	tc c	actc	tgcti	t tc	ccaa	atgg	att	ctgttg	g 2755
tgaag															2760

Met Thr Lys Asp Lys Glu Pro Ile Val Lys Ser Phe His Phe Val Cys <400> 41 -20 -25 -30 Leu Met Ile Ile Val Gly Thr Arg Ile Gln Phe Ser Asp Gly Asn -10 -15 Glu Phe Ala Val Asp Lys Ser Lys Arg Gly Leu Ile His Val Pro Lys Asp Leu Pro Leu Lys Thr Lys Val Leu Asp Met Ser Gln Asn Tyr Ile 20 Ala Glu Leu Gln Val Ser Asp Met Ser Phe Leu Ser Glu Leu Thr Val 35 Leu Arg Leu Ser His Asn Arg Ile Gln Leu Leu Asp Leu Ser Val Phe Lys The Asn Gln Asp Leu Glu Tyr Leu Asp Leu Ser His Asn Gln Leu Gln Lys Ile Ser Cys His Pro Ile Val Ser Phe Arg His Leu Asp Leu 85 Ser Phe Asn Asp Phe Lys Ala Leu Pro Ile Cys Lys Glu Phe Gly Asn 100 Leu Ser Gln Leu Asn Phe Leu Gly Leu Ser Ala Met Lys Leu Gln Lys <u>-115</u> Leu Asp Leu Leu Pro Ile Ala His Leu His Leu Ser Tyr Ile Leu Leu Asp Leu Arg Asn Tyr Tyr Ile Lys Glu Asn Glu Thr Glu Ser Leu Gln 155 150 Ile Leu Asn Ala Lys Thr Leu His Leu Val Phe His Pro Thr Ser Leu 170 165 Phe Ala Ile Gln Val Asn Ile Ser Val Asn Thr Leu Gly Cys Leu Gln 185 Leu Thr Asn Ile Lys Leu Asn Asp Asp Asn Cys Gln Val Phe Ile Lys 200 195 Phe Leu Ser Glu Leu Thr Arg Gly Pro Thr Leu Leu Asn Phe Thr Leu 225 220 215 210 Asn His Ile Glu Thr Trp Lys Cys Leu Val Arg Val Phe Gln Phe Leu Trp Pro Lys Pro Val Glu Tyr Leu Asn Ile Tyr Asn Leu Thr Ile Ile Glu Ser Ile Arg Glu Glu Asp Phe Thr Tyr Ser Lys Thr Thr Leu Lys Ala Leu Thr Ile Glu His Ile Thr Asn Gln Val Phe Leu Phe Ser Gln Thr Ala Leu Tyr Thr Val Phe Ser Glu Met Asn Ile Met Met Leu Thr Ile Ser Asp Thr Pro Phe Ile His Met Leu Cys Pro His Ala Pro Ser Thr Phe Lys Phe Leu Asn Phe Thr Gln Asn Val Phe Thr Asp Ser Ile Phe Glu Lys Cys Ser Thr Leu Val Lys Leu Glu Thr Leu Ile Leu £. Gln Lys Asn Gly Leu Lys Asp Leu Phe Lys Val Gly Leu Met Thr Lys Asp Met Pro Ser Leu Glu Ile Leu Asp Val Ser Trp Asn Ser Leu Glu Gly Arg His Lys Glu Asn Cys Thr Trp Val Glu Ser Ile Val Val Leu Asn Leu Ser Ser Asn Met Leu Thr Asp Ser Val Phe Arg Cys Leu Pro Pro Arg Ile Lys Val Leu Asp Leu His Ser Asn Lys Ile Lys Ser Val Pro Lys Gln Val Val Lys Leu Glu Ala Leu Gln Glu Leu Asn Val Ala Phe Asn Ser Leu Thr Asp Leu Pro Gly Cys Gly Ser Phe Ser Ser Leu Ser Val Leu Ile Ile Asp His Asn Ser Val Ser His Pro Ser Ala Asp Phe Phe Gln Ser Cys Gln Lys Met Arg Ser Ile Lys Ala Gly Asp Asn Pro Phe Gln Cys Thr Cys Glu Leu Arg Glu Phe Val Lys Asn Ile Asp Gln Val Ser Ser Glu Val Leu Glu Gly Trp Pro Asp Ser Tyr Lys 520 525

Cys Asp Tyr Pro Glu Ser Tyr Arg Gly Ser Pro Leu Lys Asp Phe His . 535 Met Ser Glu Leu Ser Cys Asn Ile Thr Leu Leu Ile Val Thr Ile Gly Ala Thr Met Leu Val Leu Ala Val Thr Val Thr Ser Leu Cys Ile Tyr Leu Asp Leu Pro Trp Tyr Leu Arg Met Val Cys Gln Trp Thr Gln Thr Arg Arg Arg Ala Arg Asn Ile Pro Leu Glu Glu Leu Gln Arg Asn Leu Gln Phe His Ala Phe Ile Ser Tyr Ser Glu His Asp Ser Ala Trp Val Lys Ser Glu Leu Val Pro Tyr Leu Glu Lys Glu Asp Ile Gln Ile Cys Led His Glu Arg Asn Phe Val Pro Gly Lys Ser Ile Val Glu Asn Ile Ile Asn Cys Ile Glu Lys Ser Tyr Lys Ser Ile Phe Val Leu Ser Pro Asia Phe Val Gln Ser Glu Trp Cys His Tyr Glu Leu Tyr Phe Ala His His Asn Leu Phe His Glu Gly Ser Asn Asn Leu Ile Leu Ile Leu Leu Glu Pro Ile Pro Gln Asn Ser Ile Pro Asn Lys Tyr His Lys Leu Lys Ala Leu Met Thr Gln Arg Thr Tyr Leu Gln Trp Pro Lys Glu Lys Ser Lys Arg Gly Leu Phe Trp Ala Asn Ile Arg Ala Ala Phe Asn Met Lys Leu Thr Leu Val Thr Glu Asn Asn Asp Val Lys Ser

<210> 42

<211> 3168

<212> DNA

<213> Unknown

<220> <223> Description of Unknown Organism:primate; surmised Homo sapiens <220> <221> CDS <222> (1) .. (3165) <220> <221> mat peptide <222> (144)..(3165) <400> 42 atg ccc atg aag tgg agt ggg tgg agc tgg ggg ccg gcc act 48 Met Pro Met Lys Trp Ser Gly Trp Arg Trp Ser Trp Gly Pro Ala Thr -40 -45 cac aca gcc ctc cca ccc cca cag ggt ttc tgc cgc agc gcc ctg cac 96 His Thr Ala Leu Pro Pro Pro Gln Gly Phe Cys Arg Ser Ala Leu His -25 -30 ccg ttg tct ctc ctg gtg cag gcc atc atg ctg gcc atg acc ctg gcc 144 Pro Leu Ser Leu Leu Val Gln Ala Ile Met Leu Ala Met Thr Leu Ala -10 四15 ctg ggt acc ttg cct gcc ttc cta ccc tgt gag ctc cag ccc cac ggc 192 Leu Ely Thr Leu Pro Ala Phe Leu Pro Cys Glu Leu Gln Pro His Gly ctg gtg aac tgc aac tgg ctg ttc ctg aag tct gtg ccc cac ttc tcc 240 Leu Val Asn Cys Asn Trp Leu Phe Leu Lys Ser Val Pro His Phe Ser 20 الـــــا atg gca gca ece egt gge aat gte ace age ett tee ttg tee tee aac 288 Met Ala Ala Pro Arg Gly Asn Val Thr Ser Leu Ser Leu Ser Ser Asn 35 cgc atc cac cac ctc cat gat tct gac ttt gcc cac ctg ccc agc ctg 336 Arg Ile His His Leu His Asp Ser Asp Phe Ala His Leu Pro Ser Leu 55 50 cgg cat ctc aac ctc aag tgg aac tgc ccg ccg gtt ggc ctc agc ccc 384 Arg His Leu Asn Leu Lys Trp Asn Cys Pro Pro Val Gly Leu Ser Pro 75 65 atg cac ttc ccc tgc cac atg acc atc gag ccc agc acc ttc ttg gct 432 Met His Phe Pro Cys His Met Thr Ile Glu Pro Ser Thr Phe Leu Ala 90 85 480 gtg ccc acc ctg gaa gag cta aac ctg agc tac aac atc atg act Val Pro Thr Leu Glu Glu Leu Asn Leu Ser Tyr Asn Asn Ile Met Thr 110 105 100 gtg cct gcg ctg ccc aaa tcc ctc ata tcc ctg tcc ctc agc cat acc 528

Val	Pro	Ala	Leu	Pro	Lys	Ser	Leu	Ile	Ser	Leu	Ser	Leu	Ser	His	Thr		
		115					120					125					
Asn	atc Ile 130	ctg Leu	atg Met	cta Leu	gac Asp	tct Ser 135	gcc Ala	agc Ser	ctc Leu	gcc Ala	ggc Gly 140	ctg Leu	cat His	gcc Ala	ctg Leu	576	
cgc Arg 145	ttc Phe	cta Leu	ttc Phe	atg Met	gac Asp 150	ggc Gly	aac Asn	tgt Cys	tat Tyr	tac Tyr 155	aag Lys	aac Asn	ccc Pro	tgc Cys	agg Arg 160	624	
cag Gln	gca Ala	ctg Leu	gag Glu	gtg Val 165	gcc Ala	ccg Pro	ggt Gly	gcc Ala	ctc Leu 170	ctt Leu	ggc Gly	ctg Leu	ggc Gly	aac Asn 175	ctc Leu	672	
acc Thr	cac His	ctg Leu	tca Ser 180	ctc Leu	aag Lys	tac Tyr	aac Asn	aac Asn 185	ctc Leu	act Thr	gtg Val	gtg Val	ccc Pro 190	cgc Arg	aac Asn	720	
ctg Leu	ect Pro	tcc Ser 195	Ser	ctg Leu	gag Glu	tat Tyr	ctg Leu 200	ctg Leu	ttg Leu	tcc Ser	tac Tyr	aac Asn 205	cgc Arg	atc Ile	gtc Val	768	
aaa Lys	IF	Ala	cct Pro	gag Glu	gac Asp	ctg Leu 215	gcc Ala	aat Asn	ctg Leu	acc Thr	gcc Ala 220	ctg Leu	cgt Arg	gtg Val	ctc Leu	816	
gat Asp 225	o "Val 5⊑	ggc	gga Gly	aat Asn	tgc Cys 230	Arg	cgc Arg	tgc Cys	gac Asp	cac His 235	ATG	ccc Pro	aac Asn	ccc Pro	tgc Cys 240	864	
ato Met	⊑Glι □	tgc Cys	cct Pro	cgt Arc 245	, His	ttc Phe	ccc Pro	cag Gln	cta Lev 250	I HIS	ccc Pro	gat Asp	acc Thr	ttc Phe 255	agc Ser	912	
-cac	e cto	g ago	c cgt Arg 260	η Leι	gaa ıGlu	ggc Gly	ctg Leu	gtg Val 265	. ner	g aag Lys	gac Asp	agt Ser	tct Ser 270		tcc Ser	960	
tg: Tr:	g cto p Le	g aat ı Ası 27!	n Ala	a gt	t tgg r Trp	tto Phe	cgt Arg 280	l GT	g cto / Lei	g gga ı Gly	a aac 7 Asr	c cto Lev 289	x xxx 5	gtg y Val	ctg Leu	1008	
ga As	c ctop p Lev 29	u Se:	t gag r Gli	g aad 1 Asi	c tto n Phe	c cto e Lev 29	і Туі	c aaa c Lys	a tgo s Cyn	c ato s Ile	e act Thi	r ny,	a aco	aag Lys	g gcc s Ala	1056	
tt Ph 30	e Gl	g gg n Gl	c cta y Le	a ac u Th	a caq r Gli 31	n Lei	g cgo	c aag g Lys	g ct [.] s Le	t aad u Asi 31	n ne	g tco u Se:	c tto r Pho	c aat e Ası	tac n Tyr 320	1104	
ca Gl	a aa n Ly	g ag s Ar	g gt g Va	g tc l Se	c tt r Ph	t gc e Al	c ca a Hi	c ct s Le	g tc u Se	t cte	g gc u Al	c cc a Pr	t tc o Se	c tto r Ph	c ggg e Gly	1152	

325 330 335

				323												
agc (Ber)	ctg Leu	gtc Val	gcc Ala 340	ctg Leu	Lys	gag Glu	ьeu	gac Asp 345	atg Met	cac His	ggc Gly	atc Ile	ttc Phe 350	ttc Phe	cgc Arg	1200
cca Ser	ctc Leu	gat Asp 355	gag Glu	acc Thr	acg Thr	ctc Leu	cgg Arg 360	cca Pro	ctg Leu	gcc Ala	cgc Arg	ctg Leu 365	ccc Pro	atg Met	ctc Leu	1248
Gln	act Thr 370	ctg Leu	cgt Arg	ctg Leu	cag Gln	atg Met 375	aac Asn	ttc Phe	atc Ile	aac Asn	cag Gln 380	gcc Ala	cag Gln	ctc Leu	ggc Gly	1296
atc Ile 385	ttc Phe	agg Arg	gcc Ala	ttc Phe	cct Pro 390	ggc Gly	ctg Leu	cgc Arg	tac Tyr	gtg Val 395	gac Asp	ctg Leu	tcg Ser	gac Asp	aac Asn 400	1344
cgc Arg	atc Ile	agc Ser	gga Gly	gct Ala 405	tcg Ser	gag Glu	ctg Leu	aca Thr	gcc Ala 410	acc Thr	atg Met	Gly aaa	gag Glu	gca Ala 415	gat Asp	1392
gga Gly	6 1 A 6 3 A 6 3 A	gag Glu	aag Lys 420	Val	tgg Trp	ctg Leu	cag Gln	cct Pro 425	Gly 999	gac Asp	ctt Leu	gct Ala	ccg Pro 430	gcc Ala	cca Pro	1440-
gtg Val	gac Asp	act Thr 435	Pro	agc Ser	tct Ser	gaa Glu	gac Asp 440	ttc Phe	agg Arg	ccc Pro	aac Asn	tgc Cys 445	DCI	acc Thr	ctc Leu	1488
aac Asn	ttc Phe 450	Thr	ttg Leu	gat Asp	Leu	tca Ser 455	cgg Arg	aac Asn	aac Asn	ctg Leu	gtg Val 460	. 1111	gtg Val	cag Gln	ccg Pro	1536
gag Glu 465	atg Met	ttt Phe	gcc Ala	cag Gln	ctc Leu 470	Ser	cac His	ctg Leu	cag Glr	tgc Cys 475	ner	g cgc 1 Arg	ctg Leu	ago Ser	cac His 480	1584 [·]
aac Asn	tgo Cys	ato Ile	tcc e Ser	cag Gln 485	Ala	gtc Val	aat Asn	ggo	tcc Ser 490	GII	g tto n Phe	cto Lev	ccg Pro	cto Lev 495	acc Thr	1632
ggt Gly	cto Lev	g cag ı Glı	g gto n Val	L Lev	gac Asp	ctg Leu	tcc Ser	cac His	ASI	aag 1 Lys	g cto	g gad ı Asp	cto Lev 510	^ - <i>I</i> -	cac His	1680
gag Glu	cac His	tc Se: 51	r Phe	c acc	g gag Gli	g cta 1 Lei	cca Pro 520) Ar	a cto	g gaq u Gli	g gco u Ala	c cto a Lei 52!		c cto Lev	agc Ser	1728
tac Tyr	aac Asi 53	n Se	c cag	g cco n Pro	c ttt o Phe	ggo e Gly 539	y met	g cag	g gg n Gl	c gt y Va	g gg 1 G1 54	y 111.	c aad s Ası	c tto n Pho	c agc e Ser	1776

				í													
·											,						
tc gtg () The Val	gct (Ala I	cac (His :	Leu .	ege Arg 550	acc Thr	ctg Leu	cgc Arg	cac His	ctc Leu 555	agc Ser	ctg Leu	gcc Ala	cac His	aac Asn 560	1824		
lac atc	cac a	Ser	caa Gln 565	gtg Val	tcc Ser	cag Gln	GIII	ctc Leu 570	tgc Cys	agt Ser	acg Thr	tcg Ser	ctg Leu 5 7 5	cgg Arg	1872		
gcc ctg Ala Leu	Asp	ttc Phe 580	agc Ser	ggc Gly	aat Asn	gca Ala	ctg Leu 585	ggc Gly	cat His	atg Met	tgg Trp	gcc Ala 590	gag Glu	gga Gly	1920		
gac ctc Asp Leu	tat Tyr 595	ctg Leu	cac His	ttc Phe	ttc Phe	caa Gln 600	ggc	ctg Leu	agc Ser	ggt Gly	ttg Leu 605	atc Ile	tgg Trp	ctg Leu	1968		
gac ttg Asp Leu 610	tcc Ser	cag Gln	aac Asn	cgc Arg	ctg Leu 615	cac His	acc Thr	ctc Leu	ctg Leu	ccc Pro 620	caa Gln	acc Thr	ctg Leu	cgc Arg	2016		
aac ctc Asn Leu 625	ccc Pro	aag Lys	agc Ser	cta Leu 630	cag Gln	gtg Val	ctg Leu	cgt Arg	ctc Leu 635	cgt Arg	gac Asp	aat Asn	tac Tyr	ctg Leu 640	2064		
gcc ttc Ala the	ttt Phe	aag Lys	tgg Trp 645	tgg Trp	agc Ser	ctc Leu	cac His	ttc Phe 650	ctg Leu	ccc Pro	aaa Lys	ctg Leu	gaa Glu 655	gtc Val	2112		
ctc gac Leu Asp	ctg Leu	gca Ala 660	Gly	aac Asn	cag Gln	ctg Leu	aag Lys 665	gcc Ala	ctg Leu	acc Thr	aat Asn	ggc Gly 670	20-	ctg Leu	2160		
cct g ct Pro A la	ggc Gly 675	Thr	cgg Arg	ctc Leu	cgg Arg	agg Arg 680	ьeu	gat Asp	gto Val	agc Ser	tgc Cys 685	, 1101.	agc Ser	atc Ile	2208	·	
agc ttc Ser Phe 690	. Val	gcc Ala	ccc	ggc Gly	ttc Phe 695	Phe	tcc Ser	aag Lys	gco Ala	aag Lys 700	, 010	g ct <u>c</u> 1 Lev	g cga i Arg	gag Glu	2256		
ctc aac Leu Asr 705	: ctt 1 Leu	ago Ser	gcc Ala	a aac a Asn 710	J ATS	c ctó a Lei	aag Lys	aca Thi	gtg Val	r war	cac His	c tco s Sei	tgg Trp	ttt Phe 720	2304		
ggg ccc Gly Pro	ctg Leu	gcg Ala	g agt a Sei 729	r Ala	cto Lei	g caa ı Glı	a ata n Ile	cta Lei 73	T Wel	t gta p Va:	a ago l Se:	c gco r Ala	a Ası 73		2352		
ctg cad Leu His	tgc Cys	c gco s Ala 740	а Су	t ggg	g gcg	g gco a Ala	c tti a Phe 74!	5 116	g ga t As	c tto p Pho	c cto e Le	g cto u Le 75	_	g gtg u Val	2400		
cag gc	t gco	s gt	g cc	c gg	t ct	g cc	c ag	c cg	g gt	g aa	g tg	t gg	c ag	t ccg	2448		

		755					760	•				703					
Ğİy	Gln 770	Leu	Gln	GIY	ьеи	agc Ser 775	тте	Pne	Ala	GIII	780	БСС	**** 9		:	2496	х.
Leu 785	Asp	Glu	Ala	Leu	Ser 790	tgg Trp	Asp	Cys	Pne	795	neu	Der	пси	ДСС	800	2544	
gtg Val	gct Ala	ctg Leu	ggc Gly	ctg Leu 805	ggt Gly	gtg Val	ccc Pro	atg Met	ctg Leu 810	cat His	cac His	ctc Leu	tgt Cys	ggc Gly 815	tgg Trp	2592	
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gto Val	. Wal 850	Phe	gac Asp	aaa Lys	acg Thr	cag Gln 855	agc Ser	gca Ala	gtg Val	gca Ala	gac Asp 860	115	gtg Val	tac Tyr	aac Asn	2736	
gag Gli 869	ı ₌Leu	. cgg . Arg	Gly aaa	cag Gln	ctg Leu 870	GIU	gag Glu	tgc Cys	cgt Arg	999 Gly 875	Arg	tgg Trp	gca Ala		cgc Arg 880	2784	
	L	ctg Lev	gag Glu	gaa Glu 885	ı Arg	gac Asp	tgg Trp	ctg Leu	cct Pro 890	GTA	aaa Lys	aco Thr	cto Lei	ttt Phe 895	gag Glu	2832	
_aa _ As	H.	g tgg ı Trp	g gcc Ala 900	a Sei	g gto r Val	tat Tyr	ggc Gly	ago Ser 905	Are	aag Lys	ace Thi	g cto Lei	g ttt 1 Phe 910		g ctg L Leu	2880	
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gc Al	c ca a Gl: 93	n Gli	g cgo n Aro	g Le	g cte	g gag u Gli 939	ı ASL	cgo Arg	c aaq g Lys	g gad s Asp	g gto ya: 94		g gt l Va	g cte	g gtg u Val	2976	
at I1 94	.c ct .e Le		c cc r Pr	t ga o As	c gg p Gl 95	y Arg	c cgo g Arg	tc g Se:	c cgo r Arg	c tai g Ty: 95!	LVG	g cg l Ar	g ct g Le	g cg u Ar	c cag g Gln 960	3024	
	_	c tg u Cy	c cg s Ar	c ca g Gl 96	n Se	t gt r Va	c cto l Le	c ct u Le	c tg u Tr 97	b Er	c ca o Hi	c ca s Gl	g co n Pr	c ag o Se 97	t ggt r Gly 5	3072	

cag ege age tte tgg gee eag etg gge atg gee etg ace agg gae aac In Arg Ser Phe Trp Ala Gln Leu Gly Met Ala Leu Thr Arg Asp Asn 990 985 980 cac cac ttc tat aac cgg aac ttc tgc cag gga ccc acg gcc gaa tag His His Phe Tyr Asn Arg Asn Phe Cys Gln Gly Pro Thr Ala Glu 1000 <210> 43 <211> 1055 <212> PRT <213> Unknown <400> 43 Met Pro Met Lys Trp Ser Gly Trp Arg Trp Ser Trp Gly Pro Ala Thr -40 -45 His Thr Ala Leu Pro Pro Pro Gln Gly Phe Cys Arg Ser Ala Leu His -25 -30 £ Pro Feu Ser Leu Leu Val Gln Ala Ile Met Leu Ala Met Thr Leu Ala -10 Leu Gly Thr Leu Pro Ala Phe Leu Pro Cys Glu Leu Gln Pro His Gly 10 5 Leu Val Asn Cys Asn Trp Leu Phe Leu Lys Ser Val Pro His Phe Ser 25 20 Met Ala Pro Arg Gly Asn Val Thr Ser Leu Ser Leu Ser Ser Asn 40 Arg Tle His His Leu His Asp Ser Asp Phe Ala His Leu Pro Ser Leu 55 Arg His Leu Asn Leu Lys Trp Asn Cys Pro Pro Val Gly Leu Ser Pro 75 70 65 Met His Phe Pro Cys His Met Thr Ile Glu Pro Ser Thr Phe Leu Ala 90 85 Val Pro Thr Leu Glu Glu Leu Asn Leu Ser Tyr Asn Asn Ile Met Thr 110 105 Val Pro Ala Leu Pro Lys Ser Leu Ile Ser Leu Ser Leu Ser His Thr 125 120 115 Asn Ile Leu Met Leu Asp Ser Ala Ser Leu Ala Gly Leu His Ala Leu 140 135 130 Arg Phe Leu Phe Met Asp Gly Asn Cys Tyr Tyr Lys Asn Pro Cys Arg

3168

145					150					155					160		
Gln /	Ala	Leu	Glu	Val 165	Ala	Pro	Gly	Ala	Leu 170	Leu	Gly	Leu	Gly	Asn 175	Leu		
Thr	His	Leu	Ser 180	Leu	Lys	Tyr	Asn	Asn 185	Leu	Thr	Val	Val	Pro 190	Arg	Asn		
Leu	Pro	Ser 195	Ser	Leu	Glu	Tyr	Leu 200	Leu	Leu	Ser	Tyr	Asn 205	Arg	Ile	Val		
Lys	Leu 210	Ala	Pro	Glu	Asp	Leu 215	Ala	Asn	Leu	Thr	Ala 220	Leu	Arg	Val	Leu		
Asp 225	Val	Gly	Gly	Asn	Cys 230	Arg	Arg	Cys	Asp	His 235	Ala	Pro	Asn	Pro	Cys 240		
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	£	Ser	Arg 260	Leu	Glu	Gly	Leu	Val 265	Leu	Lys	Asp	Ser	Ser 270	Leu	Ser		
Trp	€ Leu	Asn 275	Ala	Ser	Trp	Phe	Arg 280	Gly	Leu	Gly	Asn	Leu 285	Arg	Val	Leu		
	_ ↓Leu ↓290	Ser	Glu	Asn	Phe	Leu 295	Tyr	Lys	Cys	Ile	Thr 300	Lys	Thr	Ъуs	Ala		
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Gln	Thr 370		ı Arg	g Lev	ı Glr	Met 375	Ası	n Phe	e Ile	e Asr	380	Ala	Glr	Leu	Gly		
Ile 385		e Arg	g Ala	a Phe	9 Pro	Gly	z Lev	ı Arç	д Туг	7 Val	Asp	Leu	ı Sei	r Asp	400		
Arg	, Ile	e Se	r Gly	y Ala 40	a Sei	c Glu	ı Le	u Th	r Ala 410	a Thi	c Met	Gly	/ Glu	1 Ala 415	Asp		
Gly	g Gly	y Gl	u Lya 42	s Vai	l Tr	p Lei	ı Gl	n Pro	o Gly 5	y Asj	p Lev	ı Ala	43	o Ala	a Pro		
Va]	L As	p Th	r Pr	o Se	r Se	r Gl	u As	p Ph	e Ar	g Pro	o Ası	n Cya	s Se	r Thi	c Leu		

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Asn Phe Thr Leu Asp Leu Ser Arg Asn Asn Leu Val Thr Val Gln Pro Glu Met Phe Ala Gln Leu Ser His Leu Gln Cys Leu Arg Leu Ser His Asn Cys Ile Ser Gln Ala Val Asn Gly Ser Gln Phe Leu Pro Leu Thr Gly Leu Gln Val Leu Asp Leu Ser His Asn Lys Leu Asp Leu Tyr His Glu His Ser Phe Thr Glu Leu Pro Arg Leu Glu Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe Gly Met Gln Gly Val Gly His Asn Phe Ser Phe Val Ala His Leu Arg Thr Leu Arg His Leu Ser Leu Ala His Asn Asn Tle His Ser Gln Val Ser Gln Gln Leu Cys Ser Thr Ser Leu Arg Ala Leu Asp Phe Ser Gly Asn Ala Leu Gly His Met Trp Ala Glu Gly Asp Leu Tyr Leu His Phe Phe Gln Gly Leu Ser Gly Leu Ile Trp Leu Asp Leu Ser Gln Asn Arg Leu His Thr Leu Leu Pro Gln Thr Leu Arg Asn Leu Pro Lys Ser Leu Gln Val Leu Arg Leu Arg Asp Asn Tyr Leu Ala Phe Phe Lys Trp Trp Ser Leu His Phe Leu Pro Lys Leu Glu Val Leu Asp Leu Ala Gly Asn Gln Leu Lys Ala Leu Thr Asn Gly Ser Leu Pro Ala Gly Thr Arg Leu Arg Leu Asp Val Ser Cys Asn Ser Ile Ser Phe Val Ala Pro Gly Phe Phe Ser Lys Ala Lys Glu Leu Arg Glu

Leu Asn Leu Ser Ala Asn Ala Leu Lys Thr Val Asp His Ser Trp Phe

Gly Pro Leu Ala Ser Ala Leu Gln Ile Leu Asp Val Ser Ala Asn Pro Leu His Cys Ala Cys Gly Ala Ala Phe Met Asp Phe Leu Leu Glu Val 745 740 Gln Ala Ala Val Pro Gly Leu Pro Ser Arg Val Lys Cys Gly Ser Pro 760 Gly Gln Leu Gln Gly Leu Ser Ile Phe Ala Gln Asp Leu Arg Leu Cys Leu Asp Glu Ala Leu Ser Trp Asp Cys Phe Ala Leu Ser Leu Leu Ala 790 Val Ala Leu Gly Leu Gly Val Pro Met Leu His His Leu Cys Gly Trp 810 805 Asp Leu Trp Tyr Cys Phe His Leu Cys Leu Ala Trp Leu Pro Trp Arg 825 Gly Arg Gln Ser Gly Arg Asp Glu Asp Ala Leu Pro Tyr Asp Ala Phe 845 840 Val Val Phe Asp Lys Thr Gln Ser Ala Val Ala Asp Trp Val Tyr Asn 855 Glu-Leu Arg Gly Gln Leu Glu Glu Cys Arg Gly Arg Trp Ala Leu Arg 875 870 865 LeurCys Leu Glu Glu Arg Asp Trp Leu Pro Gly Lys Thr Leu Phe Glu 885 **|** Asn Leu Trp Ala Ser Val Tyr Gly Ser Arg Lys Thr Leu Phe Val Leu 910 900 Ala His Thr Asp Arg Val Ser Gly Leu Leu Arg Ala Ser Phe Leu Leu 925 920 Ala Gln Gln Arg Leu Leu Glu Asp Arg Lys Asp Val Val Leu Val 940 935 930 Ile Leu Ser Pro Asp Gly Arg Arg Ser Arg Tyr Val Arg Leu Arg Gln 945 Arg Leu Cys Arg Gln Ser Val Leu Leu Trp Pro His Gln Pro Ser Gly 975 970 Gln Arg Ser Phe Trp Ala Gln Leu Gly Met Ala Leu Thr Arg Asp Asn 980 His His Phe Tyr Asn Arg Asn Phe Cys Gln Gly Pro Thr Ala Glu 1000 995

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145				150					155					160	
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tct cag Ser Gln	ttc Phe	ctg Leu 180	ccg Pro	ctg Leu	acc Thr	ggt Gly	ctg Leu 185	cag Gln	gtg Val	cta Leu	gac Asp	ctg Leu 190	tcc Ser	cac His	576
aat aag Asn Lys	ctg Leu 195	Asp	ctc Leu	tac Tyr	cac His	gag Glu 200	cac His	tca Ser	ttc Phe	acg Thr	gag Glu 205	cta Leu	cca Pro	cga Arg	624
ctg gag Leu Glu 210	Ala	ctg Leu	gac Asp	ctc Leu	agc Ser 215	tac Tyr	aac Asn	agc Ser	cag Gln	ccc Pro 220	ttt Phe	agc Ser	atg Met	aag Lys	672
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Gly <u>-</u> Arg	ate g Met 27	Trp	gat Asp	gag Glu	Gly aaa	ggc Gly 280	пец	tat Tyr	cto Leu	cat His	ttc Phe 285		caa Gln	ggc	864
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ctc cg Leu Ar 305		c caç o Gli	g aac n Asr	ctt Leu 310	Asp	aac Asr	cto Lev	ccc Pro	aag Lys 315	5 501	c cto Lev	aag Lys	cts Lev	g ctg Leu 320	960
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ttc ct Phe Le	a co u Pr	c aa o As	n Lei	g gaa u Glu	a gto ı Val	c cta l Le:	a gad u Asj 34!	р пе	g gca u Ala	a gg a Gl	c aad y Asi	c cag n Glr 350		a aag u Lys	1056
gcc ct Ala Le	g ac eu Th 35	ır As	t gg n Gl	c acc	c cte	g cc u Pro 36	O AS	t gg n Gl	c ac y Th	c ct r Le	c ct u Le 36		g aa n Ly	a ctc s Leu	1104

gat Asp	gtc Val 370	agt Ser	agc Ser	aac Asn	Ser	atc Ile 375	gtc Val	tct Ser	gtg Val	Ala	ccc Pro 380	ggc Gly	ttc Phe	ttt Phe	tcc Ser	1152	
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ttt Phe	⊢ ggc €ly	ctt Leu	tca Ser	ctc Leu 485	Leu	gct Ala	gtg Val	gcc Ala	gtg Val 490	. Сту	atg Met	g gtg Val	gtg Val	cct Pro 495	ata Ile	1488	
cto Lev	≓ gŒac uHis ⊨	cat His	cto Lev 500	ı Cys	ggc Gly	tgg Trp	gac Asp	gto Val	TTF	tac Tyr	tgt Cys	ttt Phe	cat His 510		tgc Cys	1536	
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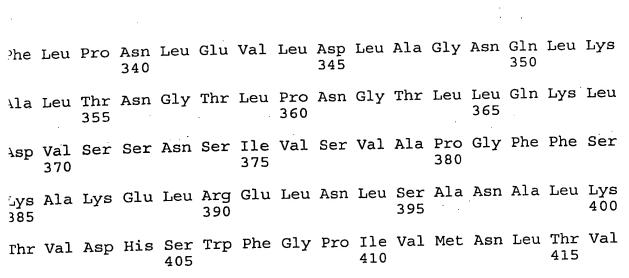
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Ala Asp Leu Pro Lys Leu His Thr Leu His Leu Gln Met Asn Phe Ile

Asn Gln Ala Gln Leu Ser Ile Phe Gly Thr Phe Arg Ala Leu Arg Phe Val Asp Leu Ser Asp Asn Arg Ile Ser Gly Pro Ser Thr Leu Ser Glu Ala Thr Pro Glu Glu Ala Asp Asp Ala Glu Glu Glu Leu Leu Ser Ala Asp Pro His Pro Ala Pro Leu Ser Thr Pro Ala Ser Lys Asn Phe Met Asp Arg Cys Lys Asn Phe Lys Phe Asn Met Asp Leu Ser Arg Asn Asn Leu Val Thr Ile Thr Ala Glu Met Phe Val Asn Leu Ser Arg Leu Gln Cys Leu Ser Leu Ser His Asn Ser Ile Ala Gln Ala Val Asn Gly Ser Gln Phe Leu Pro Leu Thr Gly Leu Gln Val Leu Asp Leu Ser His Asn Lys Leu Asp Leu Tyr His Glu His Ser Phe Thr Glu Leu Pro Arg Leu-Glu Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe Ser Met Lys Gly Ile Gly His Asn Phe Ser Phe Val Thr His Leu Ser Met Leu Gln -Ser Leu Ser Leu Ala His Asn Asp Ile His Thr Arg Val Ser Ser His Leu Asn Ser Asn Ser Val Arg Phe Leu Asp Phe Ser Gly Asn Gly Met Gly Arg Met Trp Asp Glu Gly Gly Leu Tyr Leu His Phe Phe Gln Gly Leu Ser Gly Val Leu Lys Leu Asp Leu Ser Gln Asn Asn Leu His Ile Leu Arg Pro Gln Asn Leu Asp Asn Leu Pro Lys Ser Leu Lys Leu Ser Leu Arg Asp Asn Tyr Leu Ser Phe Phe Asn Trp Thr Ser Leu Ser



Leu Asp Val Arg Ser Asn Pro Leu His Cys Ala Cys Gly Ala Ala Phe 420 425 430

Val Asp Leu Leu Glu Val Gln Thr Lys Val Pro Gly Leu Ala Asn 435 440 445

Gly Val Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly Arg Ser Ile Phe

Ala 🗐n Asp Leu Arg Leu Cys Leu Asp Glu Val Leu Ser Trp Asp Cys 465

Phe Hy Leu Ser Leu Leu Ala Val Ala Val Gly Met Val Val Pro Ile 485 490 495

Leu His His Leu Cys Gly Trp Asp Val Trp Tyr Cys Phe His Leu Cys
500 505 510

Leu Ala Trp Leu Pro Leu Leu Ala Arg Ser Arg Arg Ser Ala Gln Thr 520 525

Leu Pro Tyr Asp Ala Phe Val Val Phe Asp Lys Ala Gln Ser Ala Val 530 540

Ala Asp Trp Val Tyr Asn Glu Leu Arg Val Arg Leu Glu Glu Arg Arg 545 555 560

Gly Arg Trp Ala Leu Arg Leu Cys Leu Glu Asp Arg Asp Trp Leu Pro 565 570 575

Gly Gln Thr Leu Phe Glu Asn Leu Trp Ala Ser Ile Tyr Gly Ser Arg
580 585 590

Lys Thr Leu Phe Val Leu Ala His Thr Asp Arg Val Ser Gly Leu Leu
595 600 605

Arg Thr Ser Phe Leu Leu Ala Gln Gln Arg Leu Leu Glu Asp Arg Lys 610 615 620

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